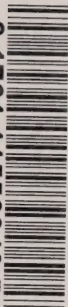


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Air Stage Subsidy Monitoring Program

Final Report

Volume 2: Food Consumption Survey

**Prepared for
The Department of Indian Affairs and Northern Development**

**by
Judith Lawn
Neima Langner
Dialogos Educational Consultants Inc.**

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Executive Summary

To assess the impact of changes to the Air Stage Subsidy on food consumption, nutrition and health of aboriginal people in isolated communities, two series of nutrition surveys of women aged 15 to 44 (a nutritionally high risk group) were undertaken. The first surveys took place in the spring of 1992. They involved 397 women from three Inuit communities – Pond Inlet and Repulse Bay in the NWT and Nain, Labrador – and two Indian communities – Fort Severn, Ontario and Davis Inlet, Labrador. The second series of surveys conducted in the spring of 1993 involved a total of 396 women in four Inuit communities – Pond Inlet, Arctic Bay, Gjoa Haven and Coral Harbour.

The survey included a 24-hour diet recall, a food frequency questionnaire, questions regarding changes in the consumption of country and store foods compared to the previous year, and a general questionnaire on health, lifestyle and socio-economic conditions.

In all of the communities in this survey there were some serious health and nutritional concerns for women of child-bearing age and particularly for women who are pregnant or lactating. Low intakes of calcium, vitamin A and folacin, especially among pregnant and lactating women, place many women at risk. The low consumption of organ meats, vegetables, fruit and dairy products makes it difficult for many women to meet their nutrient requirements. A high consumption of foods of little nutritional value and very high smoking rates in most communities are a nutritional and health concern. There are, however, large differences among communities in nutritional deficiencies and in the importance of country and store food.

Food security is a serious issue for many families, especially for those on social assistance. A variety of factors contribute to this lack of food security, including low income levels, high food costs, high unemployment, inadequate social assistance, reduced access to country food and concern over the safety of country food.

The results indicate that consumers will increase their consumption of nutritious food in response to price reductions, provided there is sufficient price change. They show that price can be a barrier to the consumption of certain nutritious foods and that other factors, such as income level, dependence on social assistance, alcohol and drug abuse and availability of country food, also affect food consumption patterns and nutrient intake.

Continuation of the subsidy is essential to sustain any nutritional benefits achieved to date and to prevent any further deterioration in nutritional status. Nutrition education, improvements in social assistance rates, greater security regarding access to country food and the cooperative effort of health, education and social assistance representatives, as well as retailers will be essential if nutritional status and health are to improve.

Recommendations are offered to improve the effectiveness of the "food mail" program.

Sommaire

Deux séries d'enquêtes nutritionnelles portant sur des femmes âgées entre 15 et 44 ans (un groupe à haut risque sur le plan de l'alimentation) ont été menées dans le but d'évaluer les répercussions des changements à la subvention accordée au service aérien omnibus sur la consommation d'aliments, la nutrition et la santé des Autochtones vivant dans des collectivités isolées. La première série a été entreprise au printemps de 1992 et mettait en cause 397 femmes de trois collectivités inuit (Pond Inlet et Repulse Bay, dans les T.N.-O., et Nain, au Labrador) et de deux collectivités indiennes, soit Fort Severn, en Ontario, et Davis Inlet, au Labrador. La seconde série, menée au printemps de 1993, a touché 396 femmes dans quatre collectivités inuit, soit Pond Inlet, Arctic Bay, Gjoa Haven et Coral Harbour.

Dans le cadre de ces enquêtes, on demandait aux femmes de faire la liste des aliments qu'elles avaient consommés depuis 24 heures, d'indiquer la fréquence de consommation des aliments précisés, de décrire les changements dans la consommation d'aliments locaux et d'aliments du commerce par rapport à l'année précédente et de répondre à un questionnaire général sur la santé, le mode de vie et les conditions socio-économiques.

Dans toutes les collectivités visées par ces enquêtes, la santé et la nutrition des femmes en âge de procréer, et surtout des femmes enceintes ou qui allaitent, soulevaient de sérieuses préoccupations. La faible consommation de produits contenant du calcium, de la vitamine A et de l'acide folique, surtout chez les femmes enceintes ou chez les mères allaitantes, constitue un risque pour de nombreuses femmes. Il est également difficile pour beaucoup d'entre elles de satisfaire leurs exigences nutritives puisqu'elles ne consomment pas assez d'abats, de légumes, de fruits et de produits laitiers. Dans la plupart des collectivités, la grande consommation d'aliments à faible valeur nutritive et le tabagisme sont des sources de préoccupations au niveau de la nutrition et de la santé. Il existe cependant d'importantes différences entre les collectivités sur le plan des déficiences nutritives et de l'importance accordée aux aliments locaux et aux aliments du commerce.

Pour de nombreuses familles, surtout celles bénéficiant d'aide sociale, la sécurité alimentaire est une question bien sérieuse. Nombre de facteurs contribuent à l'absence de sécurité, par exemple les faibles revenus, les prix élevés des aliments, le taux de chômage élevé, l'aide sociale insuffisante, l'accès réduit aux aliments locaux et l'inquiétude quant à la sûreté de ces aliments.

Les résultats ont indiqué que les consommateurs accroîtront leur consommation d'aliments nutritifs si les prix des aliments baissent – et pourvu que la baisse soit suffisante. Ils ont également indiqué que les prix peuvent constituer un obstacle à la consommation de certains aliments nutritifs et que d'autres facteurs comme la faiblesse des revenus, la dépendance de l'aide sociale, l'abus de drogues et d'alcool, ainsi que la disponibilité des aliments locaux, influent sur les habitudes alimentaires et les apports nutritionnels.

Il est essentiel de maintenir la subvention pour ne pas perdre les bénéfices obtenus à ce jour et éviter que la situation ne se détériore davantage. Pour améliorer la santé et l'alimentation, il sera essentiel de poursuivre des programmes d'éducation sur la nutrition, d'augmenter les prestations

d'aide sociale, d'assurer l'accès continue aux aliments locaux et d'obtenir la collaboration des représentants des domaines de la santé, de l'éducation et de l'aide sociale, ainsi que l'aide des commerçants au détail.

Le rapport présente aussi des recommandations visant à accroître l'efficacité du service aérien omnibus.

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Introduction

The report, "Food for the North", released in May 1991, documented a number of nutrition-related health problems affecting northern Native people, especially pregnant women, infants and young children. It also noted the growing reliance on store-bought food and the high cost of nutritious food.

In response to this report the government changed the structure of the Air Stage Subsidy (a subsidy for transporting goods to isolated communities), reducing postal rates for "nutritious perishable foods" in the Northwest Territories (NWT), allowing all isolated communities to qualify for the subsidy and removing "foods of little nutritional value" from the subsidy in order to improve access to nutritious foods and ultimately improve nutritional status. The reduction of postal rates for nutritious perishable foods in the NWT was coupled with a slight increase in rates for the provinces. It was hoped that the movement toward a uniform rate for nutritious perishables would improve consumption in the territories while not significantly reducing consumption in the provinces.

The Department of Indian Affairs and Northern Development assumed responsibility for the administration of the Air Stage Subsidy and the changes in postal rates, which were introduced on October 1, 1991 and October 1, 1992. The Air Stage Monitoring Program was developed to determine the impact of these changes on food prices, consumption, health and nutrition. This program had two major components: (1) a food price survey in 24 isolated communities eligible for the subsidy, as well as staging points and relevant southern centres, to determine the impact of food prices on the cost of a nutritious diet, particularly for those on social assistance and earning minimum wage; and (2) a food consumption survey of women aged 15 to 44 in eight communities to determine impact on consumption, health and nutritional status. This volume presents the results of the food consumption surveys.

Background

Health of Northern Indians and Inuit

Health

Definition of Health: Health, according to the World Health Organization, is "not just freedom from disease, but complete physical, mental and social well-being" and "the extent to which an individual or group is able on the one hand to realize aspirations and satisfy needs and on the other hand, to change or cope with the environment".¹ As defined by Indigenous people, health embraces one's total experience and culture and capacity to satisfy one's needs. For the Cree of Whapmagoostui, health is described as "miyupimaatisiun", which can be translated as "being alive well". To be in this state means a person, "has enough food, is strong and has the physical capacity to accomplish the task at hand". One maintains that sense of "being alive well" through eating the right foods, keeping warm and performing the activities needed to accomplish those goals.² Since health and nutrition are so closely related, it is worth reviewing the health status of the Native population.

Health Status Prior to European Contact: Early accounts of European contact with North American Aboriginal people in Arctic and sub-Arctic zones remarked on the excellent health of the population, their physical endurance, dental health and ability to recover from wounds. Nutritional problems resulted from shortages in the food supply due to natural forces rather than nutritional deficiencies inherent in a poor diet. With European contact came a host of infectious diseases with which Aboriginal people had no experience and therefore little resistance.³ Widespread epidemics of smallpox, measles, influenza, tuberculosis and typhoid decimated the Native population.

Mortality

Life expectancy/mortality rate: Below the age of 50, Native people in Canada have a considerably lower life expectancy than other Canadians. Age-specific mortality rates under age 50 for Indians on reserves (1977-1982) are approximately two to three times Canadian rates⁴ and for Inuit in the Baffin region (1983-1987) almost five times Canadian rates.⁵

Infant mortality: Internationally, the postneonatal mortality rate is the most widely accepted indicator of community health. Infant mortality rates have been declining in the Native population, but when compared to the general population, two to three times as many Indian and Inuit babies die before they reach one year of age.^{6,7} Among Indians and Inuit, the postneonatal mortality rate (due principally to infectious and parasitic diseases)^{4,6,8} is three to four times the Canadian rate and exceeds the neonatal death rate.⁶

Leading causes of death: Compared to the general Canadian population, an Indian or Inuk under age 50 is two to three times as likely to die from most causes of death, except circulatory diseases and cancer.^{6,4} Injury, including poisoning, is the single most important cause of death among Indian and Inuit, whereas for the total Canadian population, circulatory

disease and cancer are the leading causes of death. The age-adjusted death rate from infectious diseases, while declining, is still four times the national rate for Indians and 6.6 times for Inuit.^{5,6,8} The age-adjusted mortality rate for death from diseases of the respiratory system for Baffin Inuit is 5.6 times the national rate.⁵ Although injury is the most important cause of death among Inuit and Indians, cardiovascular disease is also a major killer among Indians.

Nationally, the mortality rate from coronary heart disease among Canadian Indians is very close to Canadian rates. Although death from circulatory disorders is decreasing in both groups, the Canadian rate is decreasing faster.⁹ For ischemic heart disease and stroke, Indians have reached or exceeded Canadian national rates. Mortality rates for cardiovascular disease are lower among Indian groups living in the more remote northern areas of Canada than among those in the south and are highest in eastern Canada.¹⁰ Inuit continue to have the lowest risk of death from cardiovascular disease, although this risk is steadily increasing with acculturation.⁶ This advantage among Inuit has been attributed to the protective effect of the traditional diet of sea mammals and fish, both of which contain omega-3 fatty acids.¹¹

Indians have a lower risk of death from cancer than other Canadians.⁶ Cancer mortality rates among registered Indians average 0.57 per 1,000 population compared to 1.7 for the Canadian population and 0.98 for Inuit.⁶ Cancers common among Indians include those of the kidney, gallbladder and cervix. However, this situation may be changing. A study among Indians in northern Saskatchewan found the most common sites to be cervix (15%), lung (12%) and rectum/colon (10%).¹² For the Baffin Inuit, cancer mortality has been steadily increasing, now accounting for 23% of deaths.⁵ While deaths from "modern" cancers (cervical, colorectal and breast) are on the increase, lung cancer is primarily responsible for the increase.⁵ In 1990, cancer accounted for one-third of all deaths in the Keewatin¹³. Colorectal and breast cancer are associated with diet and these increases may represent changes in eating habits, with less reliance on country food and "poor choices" of imported food.⁵

From 1981 to 1985, suicide rates for the registered Indian population were 2.6 times, for Inuit 3.3 times,⁶ and for Labrador Inuit, four times Canadian rates.¹⁴ The highest suicide rate for Indians and Inuit is in the 20-24 year age group, where Indian rates are five times and Inuit rates 7.5 times Canadian rates.

Morbidity

Infectious/Respiratory Disease: Although presently declining, infectious and parasitic diseases continue to be an important cause of illness among Indians and Inuit. The incidence of infectious disease, which may be related to poor nutrition and lowered immune status, is still five times the national rate. In the NWT, tuberculosis and meningitis occur at 10 and 15 times the national incidence rates.¹⁵ In Labrador, the incidence of meningitis among Inuit has been markedly increasing since 1970 in the community of Nain.¹⁶ Epidemics of viral and bacterial gastroenteritis still occur in Indian and Inuit communities, especially in areas with poor water and sanitation facilities.¹⁷

Rates of diseases of the newborn, attributed to premature birth, are also higher in the NWT than in the rest of Canada. The birthrate in the NWT is almost double the Canadian rate and the rate of teenage births is three times the Canadian rate. The Inuit of the Baffin and Keewatin Regions have a much higher prevalence of premature births and low-birthweight infants than the general population. In 1990, the rate of low-birthweight infants in the NWT was 5%. It was more common among teenage mothers and highest in the Baffin and Keewatin regions.¹³ For Indians, the rate of low-birthweight infants is still 7.1 per 100 compared to 4.3 for other Canadians.⁵ For northern Labrador, whose population is primarily Inuit and Indian, it is 9.4.¹⁸

Native children suffer more severe illnesses, on a more frequent basis and are hospitalized more often than other children.¹⁹ Meningitis is 200 times the national rate in Indian babies age one to seven years; Indian infants have 17 times the rate of pneumonia requiring hospitalization of non-Indian children. Eighty percent of Inuit children are either suffering from or have been exposed to otitis media, frequently leading to permanent hearing loss.¹⁹ The rates of meningitis and ear infections are highest among the Inuit children of the Keewatin region of the NWT.²⁰

Chronic Disease / Neoplasms: While diseases of infectious origin continue to predominate in the Arctic and sub-Arctic, there is growing concern among health authorities over the rapid emergence of "lifestyle" diseases, such as diabetes and cardiovascular disease, which appear related to the degree of acculturation, or adaptation to a "southern" diet and lifestyle.

Diabetes is still rare among Inuit but is increasing with acculturation.^{21,22,23} However, among southern and eastern Indian groups, diabetes is reaching epidemic proportions, with a prevalence far exceeding that among the non-Native population. The complications of diabetes among Indians are also increasing at a much higher rate than in the non-native population.²⁴ The prevalence of physician-diagnosed diabetes in some areas is over 10%.¹⁰ Among the James Bay Cree, the peak prevalence at 50 to 59 years of age is 14.1%.²⁵ In southwestern Ontario, the relative risk of diabetes among Indians is six times that of non-Indians.²⁶ Nevertheless, the prevalence among Indians is believed to be grossly under-reported.^{27,28} Among James Bay Cree, Type II diabetics have a 29% complication rate, involving diseases of the kidney, the small blood vessels and retina, with nephropathy as the leading complication, affecting 10.5% of diabetics.

Rates of coronary heart disease and stroke among Indians are close to or above Canadian national rates.⁶ High blood pressure and elevated blood cholesterol (LDL) are considered major risk factors in coronary heart disease. Research in the Sioux Lookout Zone found a high (13%) prevalence of hypertension among the population over 15.²⁹ More recent studies among Indians in northeastern Ontario and northwestern Manitoba found an overall prevalence of hypertension of 34.3%.¹⁰ The prevalence of hypertension among Inuit would appear to be lower than in Indians or the general population,²⁰ but to be increasing with acculturation.^{20,21,22,23}

A recent study of cancer incidence among Inuit, Indians and others in the NWT between 1969 and 1988 found cancers of the lung, cervix, nasopharynx and salivary gland, and cancer of

the placental lining occurring more frequently, and cancers of the breast, prostate, uterus and colon less frequently than in the total Canadian population.³⁰ Ethnic and gender differences were apparent in the standardized incidence ratios for specific cancer sites. Cancers of the colon, bladder and rectum occurred less often than expected among Inuit and Indian males. Among Inuit women, cancers occurring less often than expected included colon and breast cancer. Cancer of the placental lining and cancers of the lung, nasopharynx and salivary glands were significantly elevated. In this study lung cancer occurred six times more frequently than in the general Canadian population. Viral infections were considered a major cause of cancers of the nasopharynx and salivary gland. While high smoking rates would account for much of the elevation in lung cancer, other factors such as extreme cold, lack of vitamin A in the diet, smoke from seal oil lamps and exposure to carving dust may also be partly responsible.³⁰

Dental caries and baby bottle caries, largely attributable to the excessive consumption of sugar, are present at rates far exceeding those of southern Canada and frequently result in malocclusions and complete dental extractions.^{31,32,33,20,5} The rate of dental disease is highest in the Kitikmeot and Baffin regions.¹³ A Keewatin study found more dental disease among Inuit than non-Inuit and Inuit women at higher risk of dental disease than Inuit men.³⁴ Frequent consumption of sugar in the form of sugar-flavoured drinks, soft drinks and especially, sticky candy and gum, are believed responsible for the high prevalence of dental caries.³¹

Lifestyle

Activity Level: Studies among the Inuit of Igloolik between 1970 and 1990 found that major lifestyle changes such as more dependence on mechanized transport, less time spent hunting, and higher smoking rates resulted in lower fitness levels and higher total body fat.³⁵

Obesity: Obesity is recognized as a major risk factor in the development of Type II diabetes, coronary heart disease and cancer of the colon. Nutrition Canada (1972) found a high prevalence of overweight among Indian and Inuit adults.³⁶ More recent studies suggest that obesity is a serious problem among Indians^{29,10,37} but less of a problem among some Inuit groups.²⁰ Still, the prevalence of obesity appears to be increasing with acculturation in both Indian and Inuit communities.^{38,39,29} However, the increasing prevalence of obesity among Inuit, while accompanied by some of the expected metabolic disturbances such as elevated total and LDL cholesterol, triglycerides, and blood pressure, has not yet been associated with greater impairment in glucose tolerance or insulin levels.⁴⁰

Smoking: Smoking is a major risk factor for both coronary heart disease and lung cancer. Smoking rates are generally higher in populations with low income, high unemployment and less education.⁴¹ Smoking rates are much higher among Native than non-Native people and higher among Inuit than among Indians.^{35,20,42,13}

Mental Health: Northern Indians and Inuit suffer from more anxiety, depression and other mental disorders than the general population.^{20,6} The suicide rates for Indians and Inuit aged

20–24 are 5 and 7.5 times as high, respectively, as the rate for other Canadians.⁶ In the NWT the suicide rate has doubled in the last decade to a level of 43 per 100,000 in 1990.¹³

Many Native communities suffer from widespread alcohol and solvent abuse. This has been associated with a loss of cultural identity, a lack of employment and control over the future and little hope of escape from dependence on social assistance. The loss of the traditional support systems and the customs involved in the procurement, distribution and preparation of the traditional diet are further contributing factors.^{43,44,20,45} In the 1991 Aboriginal Peoples Survey, a high percentage of Indians and Inuit felt that alcohol abuse, drug abuse and family violence were a problem.²³

Nutritional Status of Indians and Inuit

According to the findings of Nutrition Canada and subsequent studies, many Indians and Inuit are at nutritional risk. They especially lack iron, vitamins A, C, D and folacin. Those at greatest risk are young children and women of child-bearing age. It is believed that a decline in the traditional food supply, fears related to the safety of this food supply, the lack of adequate income to support the cost of hunting and fishing, and the influx of commercial marketing strategies have combined to increase the reliance on store-bought food low in nutritional value.

Caloric Intake: While the Nutrition Canada Survey in 1971 found an inadequate caloric intake among pregnant Native women, it also found a high prevalence of obesity among adult Native women.³⁶ A 1990–91 nutrition survey in northern Manitoba found that at least half of Indian women of child-bearing age did not meet the RNI for energy.⁴⁶

Iron Deficiency: The Nutrition Canada Survey reported a high prevalence of iron-deficiency anemia and low iron intake among Native women of child-bearing age.³⁶ Subsequent studies^{47,48} have found a higher prevalence of low iron stores among Indian women and lower haemoglobin values among Inuit women. Low serum folate and ascorbate may have contributed to the latter. Iron deficiency anemia was present in four to six percent of non-pregnant women.⁴⁸ A recent study in northern Manitoba found that 75% of non-pregnant women of child-bearing age and all pregnant women did not meet the RNI for iron.⁴⁶ Other studies in northern Manitoba failed to find evidence of iron deficiency among women but iron intake was low.⁴⁹ Many Keewatin Inuit children (26.5% of those under two and 20.7% of girls 15 to 17 years) have low haemoglobin. Iron deficiency was only considered the likely cause of 25% of cases.⁵⁰

Recent studies of iron deficiency have been somewhat contradictory. One study reported a lower proportion of the Inuit population in Arctic Bay to be at risk of iron deficiency compared to the proportion in the 1971 Nutrition Canada Survey.⁵¹ Other studies suggest that iron deficiency is increasing among Native women of child-bearing age, the risk of such deficiency paralleling the decline in consumption of country foods.⁵² During a review of the Air Stage Subsidy,⁴⁵ iron deficiency anemia among pregnant women was cited as a major concern by local health authorities in many communities.

Vitamin A: A high percentage of Native pregnant women and Native women of child-bearing age in remote communities have an inadequate dietary intake of vitamin A, and are at risk of vitamin A deficiency.^{36,46} Inadequate vitamin A intake has also been reported among Indian adults in northern Ontario, Manitoba and Alberta, and among Inuit adults in Broughton Island and Arctic Bay.^{11,37,49,46,53,54}

The 1976–1980 study of the Inuit population in Arctic Bay found a low consumption of milk and vegetables, important sources of vitamin A in the southern diet. People not consuming country foods rich in vitamin A were more apt to be at risk for this vitamin deficiency.⁵⁴ A study of the James Bay Cree in 1978 found a higher prevalence of low serum vitamin A values and a lower vitamin A intake compared to those found in the Nutrition Canada Survey.⁵⁵

Calcium, Vitamin D: The Nutrition Canada Survey found a higher percentage of Indian and Inuit women with an inadequate intake of calcium compared to the general population.³⁶ More recently this has also been found to be the case with Indian women in northern Ontario and Manitoba.^{37,46} Inadequate calcium intake by Indian and Inuit adults has also been documented in other studies.^{49,56,53} In 1971, Nutrition Canada found "a serious calcium deficit" among pregnant Inuit women, "a moderate deficit" among pregnant Indian women compared to a "less than satisfactory situation" among the general population.³⁶ Inadequate vitamin D intake was also found among Indian adults in northern Alberta and northern Ontario.^{53,37} The high incidence of infantile rickets in Native communities in northern Manitoba, especially during spring, has been partly attributed to a low intake of vitamin D during pregnancy and a lack of compliance by pregnant women with vitamin D supplementation programs.⁵⁷ Inadequate calcium intake may place young Native women at greater risk for postmenopausal bone loss. A study in southwestern Ontario found detectable bone loss in 79% of postmenopausal Native women compared to 56% of non-Native women.⁵⁸

Vitamin C: Clinical evidence of vitamin C deficiency was found in some pregnant Inuit women in the Nutrition Canada survey.³⁶ Forty percent of Indian and 70% of Inuit pregnant women were at risk of vitamin C deficiency. This situation was particularly serious in remote communities.³⁶ A study of the nutritional status of the James Bay Cree found low serum vitamin C values in Indians living in remote areas.⁵⁵ In the 1982–86 study of Arctic Bay, the number of people at risk of vitamin C deficiency was lower than that found by Nutrition Canada in 1972.⁵¹

Folacin: Serum folate values determined by the Nutrition Canada Survey in 1971 classed 26% of Indian pregnant women and 42% of pregnant Inuit women at high risk of folate deficiency although no clinical evidence of folate deficiency was noted. The percentage of pregnant Aboriginal women at risk was much higher than in the Canadian population.³⁶ In 1976–80, fewer people in Arctic Bay were found at risk for this vitamin compared to the findings of Nutrition Canada.⁵¹ Indian women of child-bearing age in northern Alberta, northern Ontario and northern Manitoba were found to have an inadequate intake of folacin.^{53,37,46} Approximately three-quarters of the cases of anemia in Keewatin children and adolescents was macrocytic, suggesting folic acid deficiency.⁵⁰

Socio-Demographic Conditions of Indians and Inuit

Age and Sex Profile: Indian and Inuit communities represent a rapidly growing population, with almost half the population under the age of 15. The Duhaime Report on Quebec Inuit estimated that every member of the working age population is supporting one and a half persons other than himself/herself – a ratio three times higher than for the rest of Quebec and Canada. Of the working age group, half are women, leaving only 800 potential hunters and fishermen to supply "country food" to the whole population of 6300.⁵⁹ This situation would be typical of many Inuit communities.

Employment: Compared to the Canadian population, Native people have a much higher unemployment rate. In 1989 the unemployment rate for Native people in the NWT was 30% compared to 5% for the non-Native population.⁶⁰ In 1991, the unemployment rate for Aboriginal adults was 25% compared to 10% for the Canadian population.⁶¹ According to the 1986 census the percentage of employed Aboriginal women, age 15 and over, for the communities in this study was as follows: Repulse Bay – 19%; Pond Inlet – 33%; Nain – 32%; Davis Inlet – 20%; Fort Severn – 5%; Coral Harbour – 32%; Gjoa Haven – 18%; and Arctic Bay – 35%.⁶² In 1991, the unemployment rate for the communities in this study ranged from a low of 21.4% in Arctic Bay to 39% in Nain.⁶¹ Employment is often seasonal and non-skilled in nature. Seasonal unemployment tends to place families at a greater nutritional risk than chronic unemployment, since under these circumstances there is a greater need for emotional security and a greater likelihood of purchasing "junk" foods as a means of satisfying this need.⁶³ Unfortunately, seasonal employment is the most typical for most Native people.

Hunting and Fishing Activity: In 1988, 29% of Native women in the NWT reported hunting or fishing activity during the year with the highest level of activity in the summer months.⁶⁴ In 1991, the percentage of Aboriginal people reporting all or most of meat, fish and poultry obtained from hunting and fishing was 54% for NWT Indian, 63% for NWT Inuit, 56% for Quebec Inuit, 28% for Newfoundland and Labrador Indians and 27% for Labrador Inuit.²³

Income Level: Compared to the average census family income of \$37,827 in 1985 the average incomes for Native census families (not including extended family) in the eight communities included in this study during 1985 were as follows:⁶⁵

Repulse Bay	\$19,510	Pond Inlet	\$21,423
Nain	\$21,749	Arctic Bay	\$22,092
Davis Inlet	\$14,340	Coral Harbour	\$24,239
Fort Severn	\$14,137	Gjoa Haven	\$21,181

For the same period, the percentage of Native census families with an annual income of less than \$20,000 was 43% in Repulse Bay, 60% in Pond Inlet, 53% in Nain, 62% in Davis Inlet, 50% in Fort Severn, 47% in Coral Harbour, 37% in Gjoa Haven and 35% in Arctic Bay.⁶⁵ By comparison, this figure was 26% for Canada, so that a higher percentage of Native families are in the low-income group than in the general population. At the time of writing this report community-level income figures from the 1991 census were still not available. However, in

1991 the percentage of adults 15 years and over with an income of less than \$10,000 was 65% among Indians and 57% among Inuit compared to 28% for the Canadian population.⁶⁶

Education and Language: Education or literacy is the factor most closely related to the quality of health.^{67,68,41} In 1991, the percentage of adults with no formal schooling or less than Grade 9 was 38% among Inuit compared to only 4% for other Canadians.⁶⁶ By community, the percentage of adults aged 15 or over with only elementary school education or no formal education ranged from a low of 27% in Nain to a high of 62.3% in Gjoa Haven and 65.9% in Repulse Bay. The percentage of adults with secondary education or some secondary was also lowest in Repulse Bay (22.7%) and Gjoa Haven (29%) and approximately 44% in Coral Harbour, Pond Inlet and Davis Inlet.⁶¹

The 1989 NWT Labour Force survey found that 26% of Inuit and 11% of Dene did not speak English, while 59% of the Native population spoke a Native language and English.⁶⁹ For northern Indians and Inuit, many new coping skills are necessary in the adaptation to a cash economy. Inuit must learn to cook southern food (which has not been part of their tradition). At the same time, many northern Indians and Inuit lack literacy in English or French, so that they may find it difficult to read labels or to do comparative shopping. In 1989 the functional illiteracy rate in English was estimated at 72% in small NWT communities.¹³

Housing: Inadequate, crowded housing conditions exist for the majority of Inuit and Indian people of the northern communities.^{13,20} Only in the James Bay, Hudson and Ungava Coast, where land claim settlements have been made with the Cree and Inuit, is there adequate housing.

Family Makeup: Single parent families are more prevalent in Native than non-Native groups. These families often lack access to country food since they are unable to hunt. Native families are also larger than most Canadian families and include extended family members. This places additional strain on resources. In the 1991 census, the average economic family size (including extended family members) was 6.2 in Repulse Bay, 5.8 in Pond Inlet, 5.1 in Nain, 6.0 in Davis Inlet, 4.7 in Fort Severn, 5.3 in Coral Harbour, 5.8 in Gjoa Haven and 5.6 in Arctic Bay.⁷⁰

Environmental Contamination of the Traditional Food Supply

At every community meeting held during the Air Stage Subsidy Review, people expressed their anxiety over the contamination of country food and the impact this may have on their health, the health of their children and the survival of their culture. The potential threat of cancer and other diseases related to this contamination has led many to avoid or reduce consumption of country food, particularly the organ meats.

The inter-agency working group on contaminants, established by the Department of Indian Affairs and Northern Development in 1985, has concluded that there is a serious and widespread contamination of the Arctic food chain.⁷¹ Studies conducted since 1984 have documented the presence of PCBs and other related contaminants in the fat of northern fish and sea mammals, and migratory fish-eating birds.^{72,73} Mercury has also been detected in

fish from northern Ontario, Manitoba, Quebec and the NWT^{74,75,76,77,78} and in the liver of ringed seal and other sea mammals in the NWT.⁷¹ High cadmium levels have been found in Arctic marine mammals (e.g. narwhal), particularly in the kidney and liver, and in the liver of caribou.⁷⁹ Assessment of exposure to cadmium among Inuit of northern Quebec, for whom caribou is a staple food, did not find any association between blood cadmium and consumption of caribou organ meat although they did find a positive association between smoking and blood cadmium levels.⁸⁰ Radioactive cesium is present in low levels in caribou, but the level has been declining since the 1950s when atmospheric bomb tests were conducted.⁷⁸ Parasites have also been identified in walrus and caribou, but are considered to be endemic to these species.⁸¹ Industrial pollution in northern Europe and North America, is believed primarily responsible for the presence of toxic organic compounds (e.g. PCBs) and heavy metals (e.g. mercury and cadmium) in fish, marine mammals, migratory fish-eating birds and wild game.⁷¹ In Labrador, there is an additional concern: the effect of exhaust emissions from low-flying military aircraft on the lichen, a major food source for the caribou herds.⁸²

While the level of PCB contamination in the Arctic food supply is significantly lower than at midlatitudes, the higher consumption of marine mammals places Northerners at greater risk.⁷² In northern Quebec, PCB levels in breastmilk of Inuit women are 5 times that of southern women.⁸⁰ While the full impact of PCBs on infant health is not known at this time, the level of PCBs is of particular concern for the fetus and infant. The concern that PCBs in breastmilk may have a negative effect on the infant's immune function, and therefore on its susceptibility to infectious and respiratory disease, is now being investigated.⁸⁰

With respect to PCB contamination of the Arctic food supply, medical authorities believe that when the current state of knowledge about the hazards of these contaminants is compared to the known health benefits and the lack of nutritionally equivalent and affordable alternatives, the benefits of country food outweigh the risks.⁷² Health authorities recommend avoiding consumption of migratory, fish-eating birds such as Merganser ducks, loons and gull and tern eggs, since these foods are not essential to the diet. Mercury contamination of fish, from natural or industrial causes, can also be minimized by targeting women in the child-bearing ages to avoid fish and educating the public to avoid those species with the highest mercury level.⁸³

Impact of Socio-Economic Conditions on Nutritional Status

A 1989 study on the influence of poverty on nutrition in Regina concluded that the "clear and indisputable cause of hunger is poverty – not waste, not laziness, not mismanagement, ...(but) from people not having enough money to buy food for themselves and their families".⁸⁴ Malnutrition and poverty coexist in a vicious cycle. Poverty reduces the ability to purchase a nutritious diet and to meet basic nutritional needs for good health. It creates a continual frustration and emotional stress, and a sense of insecurity as families struggle to feed their children and to enjoy options available to middle and upper-income families. Malnutrition lowers the body's ability to resist physiological and psychological stress, increasing the individual's susceptibility to infection and disease, further elevating nutrient requirements. This reduces the individual's capacity to work or learn, increases family tensions and the likelihood

of low educational achievement, resulting in less opportunity for gainful employment and the probability of continued dependence on social assistance and poverty. Moreover, this cycle continues from one generation to the next.⁸⁵

The adequacy of the diet has been demonstrated to be directly related to the level of income and the amount spent on food. Nutrition knowledge is the second most important factor affecting dietary adequacy.⁸⁶ The "hidden costs" of poverty are a lack of coping skills (e.g., ability to do comparative shopping, budgeting skills, meal preparation skills and an understanding of the nutritional value of foods) due to limited formal education and illiteracy.^{87,85,67}

There is abundant evidence that the prevalence of poor health, chronic disease and poor nutritional status is much higher among Canadians of low socio-economic status.^{41,36,88,85,89} Canadians of poor socio-economic status have a lower life expectancy, higher mortality rates, (including infant mortality), higher morbidity rates across a wide variety of infectious and chronic diseases, including obesity and cardiovascular disease, and greater emotional stress.^{90,36} Socioeconomic conditions are believed by some to be a major obstacle to improvements in infectious disease and health in the north.¹⁸ A study of the health status of Inuit receiving social assistance found a high frequency of family and social problems and chronic disease compared to the employed population and concluded that the lack of cash in a mixed economy is negatively affecting health.⁹¹

Many nutrition-related health problems, such as iron-deficiency and folic acid-deficient anemia, obesity and low vitamin C intake, have also been found to be prevalent among low-income groups in urban centres⁹² and to be higher among women in lower income groups than among women in higher income groups.^{36,92} Lower income women have a greater tendency to be overweight and to have higher consumption of carbohydrate, especially simple carbohydrates, and lower intakes of protein and calcium.^{93,94,95} In Quebec, low-income adolescents consumed less milk and dairy products and fruits and vegetables and more calories from high-sugar foods.⁹⁶ Canadian adolescents, in general, have a less than adequate diet.³⁶ Low-income adolescents are at a greater risk for iron, vitamin C and thiamin compared to those in higher income groups.³⁶ Pregnant teenagers, particularly in low-income groups, are especially vulnerable to nutritional deficiencies since pregnancy creates additional nutritional demands for the normal growth of the fetus.⁹⁷ Low-income groups are also less likely to use nutrient supplements than those in higher income levels.⁹⁸

Low income is also associated with less positive health behaviours.⁴¹ Research indicates that feelings of helplessness, isolation and hopelessness may be one of the most important determinants of health behaviours among low-income groups.⁹⁹ In the Canada Health Promotion Survey of 1990, 13% of Canadians and 35% of low-income Canadians rated their health as "fair" or "poor".⁴¹ Of more significance, low income, limited education and unemployment had a strong negative effect on the individual's perception of their health and health behaviours.^{100,41}

The psychological effects of food shortages, or fear of food shortages, as expressed in anxiety and feelings of vulnerability and powerlessness at being unable to participate in the obvious

affluence of the majority of the Canadian population, have been documented in a number of studies.^{101,102} The Clarke Institute of Psychiatry found a high correlation between social problems (e.g., unemployment) and depression among Baffin residents and documented a prevailing sense of hopelessness and a loss of control as characteristic of many of the Baffin communities.^{103,44} In 1991, availability of food was reported as a "problem" by 5% of Indians and 15% of Inuit in the NWT, 12% of Quebec Inuit, 8% of Newfoundland and Labrador Indians and 7% of Newfoundland and Labrador Inuit.²³

High Risk Groups: Low socio-economic status places groups with increased nutrient needs at special risk. Pregnant women, infants, growing children, the elderly, and those recovering from illness, are most likely affected.⁸⁷ According to the Canadian Institute of Child Health, children born in poverty have a higher mortality rate due to a lower birthweight.¹⁰⁴ The Nutrition Canada study found that pregnant women in low-income groups were at a greater risk for a number of nutrients including vitamin C and folic acid.³⁶ Other studies have shown that low-income pregnant women had a lower calorie intake than women in higher income groups¹⁰⁵ and a high frequency of low serum levels of iron, ascorbic acid and folic acid.^{106,92} Low calcium, thiamin, vitamin A and calorie intakes have also been found in this group.^{107,108,109,110} According to the National Guidelines for Nutrition in Pregnancy, "women from low socio-economic backgrounds may be prone to long-standing poor diets, stress, infections, and closely-spaced pregnancies, all of which may compromise nutrition status and pregnancy outcome".^{97, 97} Such an environment is seldom only present during pregnancy. It has probably existed throughout life and will continue to affect the child during its early years.

Factors Affecting Food Choice in Isolated Communities

Access to a nutritious diet in isolated communities depends on a variety of factors. These include food prices, income level, the types and quality of food available, and the cultural value and supply of traditional foods and the cost associated with its procurement. Other important factors are knowledge of nutrition, the importance attached to health, the skills involved in hunting, budgeting, purchasing and preparing food, and above all, the individual's belief that he or she has control over one's health. When communities or individuals have a sense of helplessness concerning their well-being or a high level of anxiety, food choices may tend to meet emotional needs for security and comfort rather than health. Food choices in response to anxiety have been found to favour consumption of high-sugar foods in women and high-cholesterol foods in men.¹¹¹

Changes in the Traditional Diet: Dependence on Store-Bought Food

The traditional Native diet was high in protein, low in carbohydrate and moderately high in fat. Marine mammals and fish provided the Inuit with a rich source of omega-3 fatty acids¹¹² which are protective against atherosclerosis.¹¹³ A high consumption of meat, the use of organ meats and fats, seaweed (by coastal Inuit), wild greens and berries provided the necessary vitamins and minerals.

With acculturation and a declining supply of country food, the Native diet of northern Indians and Inuit has been changing rapidly toward less dependence on country food and a greater reliance on less nutritious types of store-bought foods. This has meant radical changes in nutrient content – less protein and iron, more fat, especially saturated fat, and a much higher carbohydrate intake, especially simple carbohydrates found in soft drinks and sweets. This trend has also led to a higher sodium intake and a lower intake of iron, vitamin A and folacin. The dependence on store-bought food is steadily increasing, especially among the younger generation, and it now accounts for a significant portion of the diet.^{45,53,37,22,114,39,56,31,115,116,20,21,46} The trend toward a higher fat intake is contrary to the trend reported in the Nova Scotia Heart Health Survey.¹¹⁷ These dietary changes have been accompanied by a more sedentary lifestyle.^{114,22,21,35,38}

Affordability of a Nutritious Diet in Isolated Communities

The inability to afford nutritious food and the consequent stress created for families was cited as a major concern during the review of the Air Stage Subsidy Program.⁴⁵ In most communities, families on social assistance or earning minimum wage would be at the greatest nutritional risk.

Disadvantaged groups, or those who are living in poverty and at risk, according to the Statistics Canada low income cut-offs or "poverty lines", spend 58.5% or more of gross income on basic expenditures (i.e. food, shelter).¹¹⁸ This figure, however, would not represent a reasonable "low income cut-off" in the Arctic or on northern Indian reserves because of different cost structures, expenditure patterns and arrangements for financing public services. Food price surveys conducted in isolated northern communities during 1993 estimated that the percentage of total after-shelter social assistance income required to purchase the Northern Food Basket ranged from 62% in Peawanuck in northern Ontario to 137% in Broughton Island in the NWT. A study of nine Indian communities in British Columbia also found that in most communities families could not afford a nutritious store-bought diet on current social assistance allowances and that pregnant women on social assistance could not meet their additional nutrient requirements.¹¹⁹ Families earning minimum wage in these isolated communities would be in a much more precarious position since they do not receive subsidized housing or clothing allowances. A family of four with one adult earning minimum wage would have to spend from 64% of total minimum wage income (including child tax credit, GST credit, provincial tax credit and working income supplement) in Peawanuck to 105% in Old Crow, Yukon to purchase a nutritious diet.¹²⁰

Contribution of Transportation Costs to the Cost and Availability of Food

The Air Stage Subsidy Review conducted in 1990 found that air transportation costs contributed significantly to the cost of perishable foods and therefore, to the cost of a nutritious diet in isolated communities.⁴⁵ Due to a regional food mail rate structure and the ineligibility of some regions for the service, the Northern Nutritious Food Basket (NFB) was more than twice as expensive in some NWT communities and perishables as much as three times Ottawa prices. The areas at greatest nutritional risk were the Baffin, Keewatin and Kitikmeot regions of the NWT. The study concluded that if the subsidy were phased out there

could be serious nutritional and health implications for Native people in these communities, particularly young children and women of child-bearing age.⁴⁵

Effect of Transportation Subsidies on Food Prices, Consumption and Nutritional Status

Subsidies introduced by the Saskatchewan government for perishable foods in isolated communities increased their availability, with a subsequent rise in the consumption of dairy products, fruits and vegetables.¹²¹ Meat consumption increased during seasons when country foods were not readily available. Removal of the provincial subsidy in northern Saskatchewan resulted in significantly higher food costs, reducing the availability of these foods and jeopardizing the family's ability to meet its nutritional requirements.¹²²

Changes to the air stage subsidy rates and structure in Phase I and II were found to significantly reduce the cost of nutritious perishable foods and the cost of a nutritious diet in most isolated communities in the NWT where retail competition existed. Increases in the cost of perishables in Labrador and in some communities in northern Ontario and Quebec could not be held wholly responsible for increased food costs.¹²⁰

Effect of Nutrition Education on Health

Proper nutrition is essential for normal health and reproduction, as well as the prevention and treatment of disease. Poor nutrition clearly increases the risk of nutrient deficiencies such as iron-deficiency and folic-acid deficiency anemia in pregnant women and young children, and is an important risk factor in low infant birthweight, infant mortality and morbidity. Inadequate nutrition may interfere with recovery from disease and trauma and contribute to learning problems in children. Poor nutrition is also a recognized risk factor in a number of chronic illnesses, such as cardiovascular disease, cancer and diabetes.

Actual effectiveness in terms of producing behavioural change depends on the nature of the problem, the change expected, the individual's perception regarding his or her role in dietary change, the presence of support systems, and the appropriateness of the educational approach employed. Food behaviours are difficult to change but they can and do change in response to changes in availability, education, exposure to new food and novel circumstances. No one can argue with the success of the advertising industry's supermarket and television marketing strategies in motivating consumers to try new food products. Their strategy appeals primarily to the emotional needs for belonging, status, etc. and to a lesser degree, the food's nutritional merits.

Nutrition intervention in acute and chronic illness has significantly reduced hospital stays, time in intensive care units, cost of secondary/tertiary treatment and the need for costly drugs used in the management of chronic disease. Nutritional support has reduced hospital stay and reduced complications for burn patients.¹²³ Nutrition counselling has been effective in the treatment of patients with Crohn's disease by reducing hospitalization time by 61 days,

significantly reducing the symptoms of the disease, improving nutritional status, significantly reducing drug usage and reducing time lost from work.¹²⁴

Nutrition counselling/education has also proved very effective in changing dietary behaviours and improving health in high-risk groups such as those suffering from diabetes and cardiovascular disease. Nutrition counselling for patients with cardiovascular disease, has helped to lower blood pressure and blood cholesterol levels.¹²⁵ A lifestyle nutrition education program has significantly improved dietary behaviours among cardiovascular disease patients. Its success was attributed to the development of critical/creative thinking and problem-solving skills as a direct result of the programs's interactive/reflective approach.¹²⁶

Prenatal nutrition counselling programs such as that developed by the Montreal Diet Dispensary and the U.S. Special Supplemental Food Program for Women, Infants and Children (WIC) have significantly reduced the incidence of infant anemia and the number of expected low-birthweight infants.^{127,128,129} Food supplement programs for low-income families in the United States which incorporate nutrition counselling have been found more effective in improving dietary behaviour than those that do not.¹²⁹

Nutrition education programs aimed at the development of healthy lifestyles have had mixed success. Those that have demonstrated significant improvements in dietary behaviour have been well-focussed and have used an interactive approach. For example, a school nutrition education program has been found to improve knowledge, to have a positive effect on attitude and a minimal effect on behaviour.¹³⁰ On the other hand, focussed worksite nutrition intervention programs (including point-of-purchase information, food demonstrations, nutrition classes) aimed at changing dietary habits in order to reduce cancer risk have significantly improved vegetable consumption and reduced fat consumption.¹³¹ "Point-of-purchase" information in nutrition education programs in restaurants have reported considerable success in motivating heart-healthy food choices.¹³² "Point-of-purchase" nutrition shelf-tags in supermarkets increased product purchase, with the greatest response to those products with the most flagged nutrients.¹³³ An interactive educational video program designed to motivate people to purchase healthy foods, according to the National Cancer Institute guidelines, produced marginally significant changes in food purchases.¹³⁴

Cost and Economic Benefit of Nutrition Education Programs

The cost of diabetes education programs in the United States ranged from \$150 to \$250 per patient in 1987 – the estimated savings per patient was \$292. The per-client cost of the Montreal Diet Dispensary Program, which includes prenatal nutrition counselling and nutrient supplements, has been estimated at approximately \$275. WIC estimates that every dollar spent in nutrition intervention yields \$4.21 in Medicaid savings.¹³⁵

Diet-related diseases represent a significant portion of health care costs and are considered a major cause of death in North America. The economic benefits of successful nutrition intervention are particularly significant in reducing the treatment costs for chronic diseases, such as diabetes and its complications. More than \$200 billion was spent in 1992 in the

United States for the treatment of diet-related illness, including heart disease, high blood pressure, cancer, diabetes and obesity.¹³⁶ The estimated annual cost of treating coronary heart disease and stroke in the United States is \$136 billion and \$11 billion respectively.¹³⁵ The number of days spent by diabetics in a Rhode Island hospital were reduced by 50% through nutrition counselling, with a savings of \$674,000.¹³⁷ The savings in dental care in the United States through improved dietary habits by children is estimated at \$8 billion.¹³⁸ Between \$3.5 and \$7.5 billion is spent annually in the United States in the treatment of low-birthweight infants. The cost of treating a low-birthweight infant in the United States was estimated at \$3500 per delivery.^{128,139}

The full financial benefit which might be expected from improved health and nutritional status for Aboriginal people in isolated communities is difficult to estimate. However, actual total expenditures for the NWT Department of Health for 1992/93 were \$189 million or \$3000 per capita. Much of this expenditure is nutrition-related (i.e., travel costs for dental extractions, treatment for infectious disease, lung cancer, specialized care for infants of low birthweight).

Objectives of the Food Consumption Survey

The objectives of the food consumption survey were to:

- a. assess the nutrient intake of women of child-bearing age;
- b. determine if food price changes result in significant changes in the consumption of nutritious perishable foods, in nutrient intake and in health;
- c. assess perceptions of food price changes; and
- d. assess the influence of factors which may affect the application of the subsidy or contribute to changes in food prices, food consumption, nutrition or health.

Study Design

Community Selection

In consultation with federal, territorial and local government officials, and following community visits, we selected six communities to represent the regional and ethnic population of the Northwest Territories, Labrador, and northern Ontario. All communities were either on the air stage system or contemplating its use. The 1992 survey was conducted in April/May in Pond Inlet and Repulse Bay in the Northwest Territories (NWT), in Nain and Davis Inlet, Labrador and in Fort Severn, Ontario. The surveys in Davis Inlet and Fort Severn were conducted by Medical Services Branch. The survey was also planned to take place in Fort Franklin, NWT in June after the winter roads were closed. However, due to the early arrival of warm weather in Fort Franklin many community members were unavailable for the survey at the planned time. Due to time constraints, it was not possible to reschedule the survey in this community.

Originally, it was planned to repeat the nutrition survey in each of the communities included in the 1992 survey. However, the government decided to delay the full transition to uniform postal rates and to make only minor changes to the rates for perishables in October 1992. Since the Department of Indian Affairs and Northern Development had made a commitment to the communities to conduct a second survey, the hamlet and band councils were, under the changed circumstances, given the option of participating in the 1993 nutrition survey. Pond Inlet and Fort Severn indicated an interest in participating in 1993, but Medical Services Branch was unable to secure financing for a repeat survey. Therefore, only Pond Inlet was included in the second year. Since the communities surveyed in 1992 varied so widely in terms of food consumption and availability of country food, it was felt that it would be beneficial to include more communities in 1993, in order to broaden the information base. Arctic Bay, Gjoa Haven and Coral Harbour were selected for the 1993 surveys which were conducted from March to May.

Northern Quebec could not be included in this study since Santé Québec was undertaking an Inuit Health Survey during this period. In order to ensure coverage of air stage communities in this region, arrangements were made with Santé Québec and the Kativik Regional Council of Health and Social Services to include a modified food frequency questionnaire and the questions from this survey which related to changes in food consumption and price perception in their health survey. Santé Québec also agreed to make the relevant data available to enable us to analyze the impact of changes to the subsidy on the Inuit population of northern Quebec. These results are reported in Volume 3.

Study Population

All Aboriginal women of child-bearing age (15 to 44) were selected for the study since previous studies and anecdotal evidence gathered during community visits during the Air Stage Subsidy Review suggested that this group was apt to be the most nutritionally vulnerable, and to be more reliant on store-bought foods than older groups. Also, the health of this group and their ability to satisfy their nutritional requirements has a bearing on the

health of future generations. Children are also nutritionally at risk, but an accurate nutrition survey in children is extremely difficult to accomplish.

Most nutritional surveys exclude pregnant women because of the difficulties in data analysis. We included pregnant women for two reasons: 1) northern communities have a high birth rate, and pregnant women thus constitute a substantial segment of the population; 2) this group is believed to be at the greatest nutritional risk.

Exclusions: The following women were excluded from the study:

- Women within two weeks of childbirth. (Most of these were in hospital outside the community during this time.)
- Women absent from the community (away at school, for example).
- Women who were ill during the entire period of the survey.
- Women under age 15 or over age 44.
- Women who were conducting the food consumption interviews.

Women were identified through band lists in the Indian communities and through community lists in the Inuit communities. The lists were reviewed by community representatives and interviewers before the start of the interviews and a final list of study subjects was compiled. All women in the community meeting inclusion criteria were selected for study, except in Nain. Due to the much larger size of the community in Nain, a sample of women was selected. We randomly selected one woman from each household for interview, in order to study the largest number of households.

Consultations

We held consultations with regional, provincial, territorial, local and federal government representatives and Native organizations to seek their input and approval for the study. The questionnaire was sent to these representatives for approval prior to finalization. The questionnaire was pretested with Inuit women in Arctic Bay in the Northwest Territories. We encouraged community participation through meetings with the band or hamlet council and local radio interviews.

Assessment Tools

Food Consumption Questionnaire

The food consumption questionnaire included a 24-hour diet recall; a food frequency questionnaire (frequency of consumption of country foods, store foods and alcohol over the past month) and a general questionnaire on food habits and lifestyle. This latter questionnaire included questions on the following: dietary changes and reasons for such changes; food purchasing habits and changes; pregnancy or lactation status; birthweight of children born in the past two years; medical problems; perceived health status; incidence of hunger and lack of money to purchase food; relative importance of food security vis-à-vis other issues

affecting mental health; socio-demographic variables (ethnic origin, age, income, employment, family size); lifestyle (activity level, smoking); and anthropometric data (height, weight).

An attempt was made to translate the questionnaire into each of the six dialects. However, it was only possible to complete the translation for the Baffin dialect. Food models developed by the Bureau of Nutritional Sciences, Health Canada and used in the Nova Scotia Nutrition Survey were used for the 24-hour diet recall and food frequency questionnaire.

24-Hour Diet Recall: Respondents were asked by a trained interviewer to recall all food and beverages consumed over the past 24 hours. Detailed descriptions of each food or beverage, including the cooking method and brand names, if possible, were carefully recorded. Quantities of food or beverages were estimated using the food models originally developed for the Nutrition Canada survey. These included standardized volume measures in graduated shapes (e.g. mounds), surface area models for sliced food, rulers for thickness, graduated glasses and coffee mugs, an assortment of spoons and package labels for fruit drink crystals available in the community. Interviewers also compiled a list of foods and brand names for each of the retail stores. Respondents were asked to recall any nutritional supplements which they usually take, and the Drug Identification Number if applicable, and to report their consumption of these products during the past 24 hours.

The 24-hour diet recall is considered a reliable instrument for obtaining quantitative information about the food consumption of an individual or group. To accurately assess the usual nutrient intake of an individual would require repeated 24-hour diet recalls on at least three non-consecutive days. A single 24-hour diet recall can generally provide good estimates of the average usual nutrient intakes of a group provided that the days of the week are equally represented, the subjects are representative of the population under study, and inter-individual variation compensates for intra-individual variation. Thus, mean nutrient intake of a group can generally be assessed more accurately than individual intakes. Based on a single 24-hour recall, it would only be proper to report mean intakes of a group, rather than individual intakes.

Food Frequency Questionnaire: To overcome the limitations of a 24-hour diet recall in its focus only on one day, we supplemented the recall with a food frequency questionnaire, which is designed to obtain qualitative, descriptive information about usual food consumption patterns. The food frequency questionnaire can be used to predict the intake of specific nutrients or groups of nutrients and to rank subjects into broad categories of low, medium and high intakes of certain foods, and to confirm the results of the 24-hour diet recall. In addition, we sought to determine the validity of the food choices and weighting of the Northern Nutritious Food Basket. The food frequency questionnaire generally requires less precision in the estimation of usual serving size but to improve accuracy, food models were used to describe serving size. We sought information on over 120 specific country and store foods and recorded the frequency of consumption and the average serving size consumed in the past month. Package labels were used to clearly identify different types of fruit drink crystals and fruit juice.

Training

A training manual was developed in consultation with the Bureau of Nutritional Sciences, Health Canada and with the assistance of the Nova Scotia Heart Health Program. Field coordinators were trained in the survey protocol and were responsible for the training of local women in each community. The interviewers were fluent both in English and in the local dialect from each community. Interviewers attended a five-day training program. We trained interviewers using role-playing techniques in general interviewing skills, in special interviewing techniques for the 24-hour diet recall and the food frequency questionnaire and in the proper use of the food models. The training also covered screening methods, the survey objectives and protocol. Interviewers were familiarized with the foods available in each of the retail outlets.

Administration of the Questionnaire

Respondents were screened by the interviewers to eliminate those who did not qualify for reasons of age, health or proximity to childbirth. The purpose of the survey was explained to each respondent. Respondents who were willing to participate signed a consent form before proceeding with the interview. The questionnaire was administered by local interviewers either in English or in the local dialect, according to the respondent's preference.

Data Analysis

The Bureau of Nutritional Sciences, Health Canada entered the data and analyzed nutrients in the 24-hour diet recall using the 1991 Canadian Nutrient File and the CANDI program. Nutrient data for a number of country foods were compiled from the scientific literature and the Alaska Area Native Health Service. All the data from the 24-hour recall, the food frequency and the questionnaire were then downloaded through an ASCII file and imported into SYSTAT (Evanston, Ill.) for analysis.

The information obtained from the 24-hour diet recall was analyzed by community according to 13 food groups and according to classification as perishable food, non-perishable food and food of little nutritional value (LNV) under the Air Stage Subsidy program. The classification of food categories and the division into the 13 food groups are shown in Appendix III. Country foods were treated as a separate category in the meat, fish and poultry group. Miscellaneous foods included those which did not fit easily into any category, such as seasonings, soups, canned dinners, sauces, salad dressings, tea, coffee and frozen combination dinners. The LNV category includes foods which do not qualify for the subsidy. Most of these foods are foods high in sugar, salt or fat, such as soft drinks, potato chips, candy, chocolate bars, fruit drinks without vitamin C added, frozen or ready-to-eat sweetened prepared baked goods, coffee whitener, popsicles, prepared submarine sandwiches and alcohol.

Mean intake of energy and essential nutrients were expressed as a percentage of the 1990 Recommended Nutrient Intake (RNI) established by Health and Welfare Canada¹⁴⁰ for this age-sex group and for women who are pregnant or lactating. Calculating the mean as a

percent of the RNI enables an evaluation of how adequately the group satisfies its nutrient requirements. For vitamin C, the basic RNI was increased by 50% to meet the needs of smokers. It is important to recognize that an individual is not necessarily malnourished if she does not meet this recommended level but the lower the percentage of the RNI, the greater the possibility that this is the case. If the group mean intake and percentage of RNI is low, some women would be at risk for that nutrient. However, even if the group mean and percentage of RNI appear to be adequate, individuals within this group may be at risk.

Mean nutrient intake was also analyzed according to pregnancy/lactation status, income, social assistance and education. Relationships between variables or groups were analyzed using chi-square tests for categorical data and t-tests or analysis of variance to examine differences between means of continuous variables.

Due to the small numbers of pregnant and lactating women in some communities, the mean nutrient intakes of all pregnant and lactating Inuit women were compared with the RNI for each group. A separate analysis of the 24-hour diet recall for Indian women who were pregnant or lactating was not possible due to the small number in this group.

For the food frequency questionnaire, we examined both the distribution of frequency of consumption and the mean amounts consumed by community. Using average serving sizes based on Canada's Food Guide, we also calculated the mean number of servings per day of foods from each of the 12 groups outlined above (miscellaneous was not included). Serving sizes, shown in Table 11, are not intended to reflect usual or ideal portions but merely to simplify interpretation of the data.

Questionnaire data were analyzed by community, with frequencies, cross tabulations and means where appropriate. The section of the questionnaire on food purchasing was only asked of respondents who generally buy food for the household. Percentages are reported based on the respondents who answered these questions, not on the total.

Body mass index (BMI) was used as a measure of weight to height ratio. BMI was calculated as weight (in kilograms) divided by height (in metres) squared (w/h^2).

Methodological Considerations

Before any firm conclusions may be drawn, it is important to discuss the limitations of this study. Due to the objectives of the study and the limited time frame, it was not possible to obtain baseline information which is essential in order to accurately measure change in food consumption patterns and nutrient intake. It was also not possible to perform any clinical and biochemical evaluations which would have enabled us to make a comprehensive assessment of nutritional status. The combination of the 24-hour diet recall together with a food frequency provides a better picture of usual food consumption of a group than a single 24-hour diet recall. However, this information still cannot be used to assess individual nutrient intake.

It is also important that the 24-hour diet recall represent a typical day. For all communities except Fort Severn, Davis Inlet and Gjoa Haven this would appear to be the case. In small

Native communities, which are reliant upon country food, the entire community can be eating similarly at the same time, if a particular country food is especially plentiful. This would tend to distort the group means and the results may not be typical of an entire year's consumption, since the country food supply varies by season. This variation will be greater for nutrients such as vitamin A, vitamin D, sodium, cholesterol and linoleic acid, which are concentrated in a few foods. Since our entire survey was completed during a two-week period in the spring in each community, the limitations inherent to the data must be recognized.

Another limitation is the validity of the BMI as a measure of body fat in different populations. For people of a short stocky build or those with a large bone structure, the BMI may overestimate body fat.

The accuracy of the information also depends on the skill of the interviewers. The interviewer training was conducted in English which is a second language for most women. Questionnaires were translated into the Baffin dialect for Pond Inlet and Repulse Bay but due to difficulties in arranging for translation, English questionnaires had to be used in the other communities. The proper administration of the 24-hour dietary recall and food frequency requires a quantitative and qualitative approach toward the description of food – an approach which seemed unusual to both interviewers and respondents. Every effort was made to make the interviewers feel comfortable with this methodology and to help them to understand the need for such detailed descriptions of food. We felt that the local interviewers were able to solicit a more honest response to the questionnaire than would have been possible with non-Native interviewers or with people from outside the community. The interviewers had to cope with many difficulties in order to successfully carry out the survey. There were very few telephones and some houses were quite a distance apart, so it took a lot of time to set up and conduct interviews. The survey was also carried out during very severe weather conditions. In some communities, the houses were very crowded and it was difficult to find a quiet place to conduct the interview. However, the community response was excellent and we believe the interviewers did capture an accurate picture of the food consumption pattern of this group.

Results

Community Profiles

The eight communities included in this study are isolated. They lack roads and depend on air and marine transportation for food supplies. The communities represent Indian or Inuit populations from different regions of Canada. Davis Inlet and Nain are located in northern Labrador. Davis Inlet is a Naskapi Indian nation. Nain is composed of Inuit, "settlers," who are of mixed Inuit and non-Native ancestry, and non-Native people. Fort Severn is a Cree nation of northern Ontario located near Hudson Bay. The other communities are Inuit and located in the NWT. Arctic Bay and Pond Inlet are situated on the northern tip of Baffin Island in the Eastern Arctic; Repulse Bay and Coral Harbour are in the Keewatin Region north of Hudson Bay; and Gjoa Haven is in the Kitikmeot Region of the Central Arctic. The population of these communities ranges from approximately 500 to 1000. In all NWT communities in the survey there are two grocery stores, a local cooperative store and a Northern store operated by the North West Company. In Nain and Davis Inlet, the Newfoundland government operates the only grocery store. Fort Severn has a Northern store and a private retailer. Approximate populations for the communities surveyed were as follows:

Repulse Bay	Nain	Davis Inlet	Fort Severn
500	1100	465	335
Arctic Bay	Coral Harbour	Gjoa Haven	Pond Inlet
545	580	785	1100

There are very limited employment opportunities in all these communities. Existing jobs are mostly in provincial, territorial and local government administration, health and social services, seasonal construction, carving and crafts. Retail jobs are limited to one or two food stores. Nain and Pond Inlet have a small commercial fishing industry and a number of men in Arctic Bay are employed at the lead-zinc mine in Nanisivik.

Socio-Demographic Information

Table 1 summarizes the socio-demographic information for each community. In 1992, a total of 398 women participated in the surveys which were conducted in three Inuit communities, Pond Inlet, Repulse Bay and Nain, and two Indian communities, Fort Severn and Davis Inlet. In 1993, 396 Inuit women from Pond Inlet, Arctic Bay, Coral Harbour and Gjoa Haven took part in the study, including 83 women from Pond Inlet who had been interviewed in 1992. The mean age ranged from 24.7 years in Davis Inlet to 29.2 in Nain. Among communities, from 55% to 72% of women were married or living as a couple and 26% to 45% were single.

All communities had high unemployment levels compared to Canadians in general. An average of 1.3 to 1.7 family members were working, i.e., earning income from any source including carving and crafts, at the time of the survey. An average of 5.5 to 8.3 persons were

eating in the house. Employment among the women surveyed ranged from a low of 38% in Pond Inlet to a high of 51% in Davis Inlet in 1992, and from 23% in Gjoa Haven to 41% in Pond Inlet in 1993. Part-time, year round employment was an important source of income in Pond Inlet, Coral Harbour and Gjoa Haven. The level of employment reported in Davis Inlet and Fort Severn is much higher than that reported in the 1986 census.

Educational levels varied widely by community but were generally lower than in major Canadian cities. In Arctic Bay, 24% of women had no formal education. Most women in Repulse Bay, Arctic Bay, Coral Harbour and Gjoa Haven had only elementary school education. Nain and Fort Severn were the only communities with a moderately high proportion of women who had completed high school or attended college or university (24% and 25% respectively).

Income included total family income for the past month and included money from work, fishing, hunting, trapping, carving, sale of crafts, unemployment insurance, social assistance and pensions and excluded family allowance or tax credits. There was a fairly good response to this question in most communities except Davis Inlet and Pond Inlet (1992) where at least a third did not know. In most of the communities 40–45% of families had a total income of less than \$1500 a month. The exceptions were Fort Severn, where only 20% reported such low incomes, and Gjoa Haven, where 69% had less than \$1500 a month coming in. Similarly, Fort Severn had the highest percentage of families (42%) earning more than \$2500 per month, while in most communities less than 25% of families had an income in this range.

Much of the reported income was from social assistance and Unemployment Insurance (UI). Even though Fort Severn reported the highest income levels, they also reported the highest proportion on social assistance, at 60%. In most of the other communities the proportion receiving social assistance was in the range of 40 to 55%. Only Nain was outside this range, with 29% on social assistance. However, Nain had the highest percentage of recipients of UI benefits, at 54%. Arctic Bay had the fewest on UI at 8%.

Social assistance benefits and, in particular, housing benefits vary considerably among the provinces and territories, making it difficult to compare incomes. Housing needs may be provided for by a separate shelter allowance or by a basic needs allowance which is considered sufficient to cover rent. For example, in northern Ontario, recipients qualify for a northern allowance plus a separate allowance for housing, in addition to basic assistance. In the NWT, housing for social assistance recipients is almost completely subsidized, while the food component of the basic social assistance payment is scaled by community, according to periodic food price surveys.

General Health and Lifestyle

Both Indian and Inuit women had much lower self-ratings of health than those reported by other Canadians, with wide differences in perceived health status among communities (Table 2). Mean ratings were best in Davis Inlet and worst in Coral Harbour. About a fifth to a quarter of women rated their health as fair or poor, except in Davis Inlet where only 12% did so, and Fort Severn, Pond Inlet and Coral Harbour where about one third did so.

A BMI over 27 is associated with increased risk of developing health problems, while ideal BMI is between 20 and 25. The average BMI in Pond Inlet and Nain was within the ideal range. The mean BMI in Coral Harbour and Repulse Bay was between 25 and 27. Women in Gjoa Haven, Davis Inlet and Fort Severn had an average BMI of 28.2, 30.6 and 29.2 respectively. However, with the exception of Fort Severn, there was very little reported evidence of hypertension, cardiovascular disease or diabetes.

In each year of the survey a total of 98 (1992) and 97 (1993) pregnant or nursing women were included, accounting for approximately one quarter of the sample. However, there were relatively more pregnant and lactating women in Pond Inlet and Fort Severn and fewer in Nain and Arctic Bay (Table 3). Fort Severn, Pond Inlet, Arctic Bay and Coral Harbour had 2.5 to 5 times as many women breast-feeding as pregnant. This may reflect longer nursing times in those communities.

We were unable to document significant low birthweight in these communities. A total of 276 children were under two years of age in the two surveys, with an average birthweight of 3537 grams. Only 12 infants were reported with weights under 2500 grams. Excluding the two Indian communities from the analysis, mean birthweight was 3457 grams in the 106 babies born in the Inuit communities. However, our question only asked about the birthweights of living children under the age of two, not about all births. Low birthweights of infants who may not have survived are not included in this number, whereas they would be in general statistics on low birthweight.

Smoking rates were much higher among Inuit women than among Indian women, higher than in the Canadian population in general, and higher than that found in low-income groups within the Canadian population. The percentage of smokers ranged from 68% in Gjoa Haven to 87% in Arctic Bay. Fort Severn had the lowest smoking rate (48%) and the highest percentage of ex-smokers (33%). The number of heavy smokers (more than 25 cigarettes a day) was highest in Pond Inlet (14%), Repulse Bay and Nain (11%). In most communities, smoking began at 12 to 14 years of age. Among pregnant and nursing Inuit women the smoking rate was also extremely high. In the first year, 88 to 92% of these women in Pond Inlet, Repulse Bay, Nain and Davis Inlet were smoking compared to 38% in Fort Severn. In 1993, smoking rates among pregnant and lactating women ranged from 69% in Gjoa Haven to 79% in Pond Inlet.

Most women were either moderately active or sedentary while in the village and spent very little time on the land. However, in Pond Inlet, Repulse Bay, Davis Inlet, Coral Harbour and Gjoa Haven, approximately 25% of women spent at least one to three months on the land. All women were generally more active while on the land.

Participants were asked to rate their degree of concern ("not concerned", "a little concerned", "extremely concerned") on a number of social problems. The level of concern about alcohol/drug abuse and family violence expressed in some communities may indicate the degree of family dysfunction and is evidence of the severe mental stress affecting a large number of women. With respect to alcohol use, it is important to understand that Pond Inlet, Repulse Bay and Arctic Bay are "controlled" communities where alcohol can be brought in

only under special permission by a local committee. Nain is the only community where alcohol is sold in the local hotel. The number of women who were "*extremely concerned*" about alcohol and drug abuse ranged from 10% in Repulse Bay to 38% in Nain and 47% in Davis Inlet. Although Coral Harbour and Gjoa Haven are "dry" communities where the possession or sale of alcohol is illegal, 18 to 21% were "*extremely concerned*" about alcohol and drug abuse. It is possible that in the "dry" communities, women might be reluctant to discuss this subject freely so that the degree of concern expressed in these communities may underestimate the problem.

Family violence was of greatest concern to women in Nain, Davis Inlet and Fort Severn, where 49 to 57% of women were "*extremely concerned*". Approximately one third of women in Pond Inlet, 25% of women in Arctic Bay, Coral Harbour and Gjoa Haven, and 13% of women in Repulse Bay expressed this level of concern.

Much of the information from Davis Inlet is contradictory. They had the highest self-rating of health despite a very high smoking rate and very high degree of concern about alcohol and drug abuse and family violence. Generally, Davis Inlet women were also less active than most of the other women in this study and they had the highest mean BMI. While the concern over alcohol and drug abuse would appear to be consistent with current media reports, the high self-rating of health would seem to contradict the sense of despair recently depicted by the media. It is possible that this health rating is a reflection of the community mood following a successful caribou hunt and not typical of how women usually feel about themselves.

Food Purchasing Practices and Food Security

Information on food purchasing practices was obtained only from those who purchased food for the household. The majority of the women we interviewed in all communities were the major purchasers of food for the household. There was considerable variation in the amount of money spent on groceries in the month prior to the survey (Table 3). The lowest amounts were in Labrador, with Davis Inlet families spending \$268 and Nain families \$370. In the NWT, the average amount spent ranged from \$629 in Gjoa Haven to \$1360 in Repulse Bay. Between 1992 and 1993 the average expenditure for groceries in Pond Inlet increased from \$929 to \$992 a month. This money purchased food for an average of 6.4 persons across all communities.

The perception of food affordability varied widely by community and year. In 1992, approximately half of women felt that families could not afford to purchase enough food to feed their families. Davis Inlet was the only community where most women (77%) did not feel this way. In 1993, two-thirds or more of women in Gjoa Haven, Pond Inlet and Coral Harbour and 54% in Arctic Bay believed that most families could not afford to buy enough food. Between 1992 and 1993 there was no change in the percentage of women with this opinion in Pond Inlet.

In 1992, a high percentage of women (40 to 52%) were "*extremely concerned*" about not having enough money to buy food and this issue was of greater concern to more women than alcohol/drug abuse. Only in Nain and Fort Severn were women more concerned about family

violence than the affordability of food (Table 2). In 1993, the number of women reporting this level of concern about being able to afford enough food was much higher in Coral Harbour (47%) and Pond Inlet (56%), having increased in Pond Inlet from 42% in 1992.

An alarmingly high number of women reported running out of money to buy food. Except in Arctic Bay, this was a more serious problem in most NWT communities where 80% or more of women reported running out of money to buy food. Even in Nain and Fort Severn, where the fewest households ran out of money for food, over half reported this problem. The reasons for running out of money were mostly similar although there were some differences among communities. High food costs were cited as the major reason in Repulse Bay, Pond Inlet (1993), Arctic Bay, Coral Harbour and Gjoa Haven, while unemployment was the most important reason in Davis Inlet and Fort Severn. In Nain, more women felt that insufficient income was the major cause. Waiting for social assistance or UI was also mentioned. Running out of money to buy food was significantly higher among those on social assistance and those with an income of less than \$1500 per month.

The method of dealing with this problem varied by community. In most communities, women asked for more credit or borrowed food from family or friends. In Davis Inlet and Nain, women were more apt to borrow food from family and friends than to ask for more credit. About a quarter to a third of women in Pond Inlet, Arctic Bay, Gjoa Haven and Davis Inlet requested more social assistance when they ran out of money to buy food.

In 1992, more than half the households in Repulse Bay, Davis Inlet and Pond Inlet reported not having enough to eat in the house in the past month. In the second survey year, this problem was reported by over half the families in all communities. In Pond Inlet the increase was from 54% to 68% of households. Families on social assistance were 40% more likely to not have enough to eat in the house in the previous month (Relative Risk (RR) = 1.42, 95% Confidence Interval (CI) = 1.24–1.62) and 20% more likely to run out of money to buy food (RR = 1.2, 95% CI = 1.12–1.29). Families with income less than \$1500 a month were 54% more likely to not have enough to eat (RR = 1.54, 95% CI = 1.32–1.80) and 31% more likely to run out of money for food (RR = 1.31, 95% CI = 1.21–1.43).

In 1992, access to country food did not appear to be a problem for most families in Davis Inlet and Pond Inlet. However, approximately one third of women in Fort Severn, 40% of women in Repulse Bay and 23% of those in Nain felt that most families were unable to have country food year round. Concern about the issue was not always related to access. The percentage of women who were "seriously concerned" was highest in Davis Inlet which had good access and lowest in Repulse, with poor availability (Table 3). This apparent contradiction may reflect the degree of dependence on country food and the cultural importance of country food in the diet. There was also extreme concern regarding the safety of country food among a third of women in Nain, Davis Inlet and Fort Severn.

In 1993, almost one third of women in Arctic Bay and Gjoa Haven felt that most families were unable to have country food year round. While most women felt that families had year round access, availability would appear to be a greater problem in Gjoa Haven, where 47% were actually not able to get country food year round. The reasons for not being able to get

country food varied by community. In Gjoa Haven, the distance required to travel was the major obstacle. Other obstacles noted were a lack of money for gas and a lack of employment for the hunter. In Coral Harbour, Arctic Bay and Pond Inlet other reasons included not having a snowmobile and not being able to afford gas or snowmobile repairs.

In an open-ended question, women were asked for suggestions or recommendations to help families to eat better. While there were differences among communities, the most frequent recommendations were to lower food prices, create more employment and increase income or social assistance. Interesting suggestions included more sharing, especially of country food; more frequent distribution of social assistance cheques; less junk food and more country food; less alcohol, cigarettes, drugs and gambling; nutrition and budgeting education; hunting education for the young people; food banks for the needy; a commercial bank in the community to assist families to save more money; day care facilities; bulk food; and elimination of the GST.

Again there were many inconsistencies in the Davis Inlet data. Families spent less than any other community on groceries and much less than Nain, where food prices are similar. The fact that many community members had been away for part of the previous month on a caribou hunt may partly explain this result or alternatively, such a low expenditure may indicate that money is being used for other purposes, such as alcohol and cigarettes. It is also difficult to understand why there was a belief that most people could afford enough food to feed their family, yet half were extremely concerned about running out of money to buy food, most were running out of money to buy food, and half did not have enough to eat in the house in the past month. Again, this might indeed be the case if a large portion of income is being used to purchase alcohol, drugs and cigarettes rather than food. It is difficult to understand why women in Davis Inlet were so concerned about being able to get country food when the supply of country food did not appear to be a problem for most families. This level of concern may reflect the cultural significance of caribou and the general uncertainty about its continued supply.

Nutrient Intake and Source of Nutrients

Mean energy and macronutrient intake, the contribution of protein, fat and carbohydrate to energy, the Recommended Nutrient Intake (RNI) and the percentage of RNI obtained for all women in each community are presented in Table 4a. Mean intakes of micronutrients, the RNI and percentage of RNI are provided in Table 4b. Similar information for pregnant and lactating Inuit women is given in Tables 5a and 5b. Detailed information on the percentage of nutrients from 13 food groups and the means for each food group, by perishability, is presented for each community in Tables 8a to 8i.

Calories

In most villages, mean energy intake ranged from 2100 to 2300 calories (Table 4a). The exceptions were Davis Inlet and Gjoa Haven where average energy intake was 3416 and 2759 calories respectively. Mean energy intake for pregnant women and lactating Inuit women was close to recommended levels (Table 5a). Although the numbers of pregnant

women in each community are too small to assess variations among communities based on a single day's dietary recall, the generally low calorie intakes in several of the communities may suggest that pregnant and lactating women in some communities are not meeting energy requirements. Furthermore, the wide variation about a mean which is equal to recommended intakes, and a similar median, means that on the survey day, about half the women did not meet energy requirements. If this is due to a "feast and famine" dietary cycle characteristic of traditional diets, there may not be a serious problem. If, on the other hand, the same women are consistently low on caloric intake, problems may exist.

In Pond Inlet, Repulse Bay, Nain, Arctic Bay and Coral Harbour, the major sources of calories were: meat, poultry and fish (26 to 33% of calories); foods of little nutritional value (LNV) (17 to 24%); breads and cereals (13 to 20%); sweets (5 to 14%); and combination foods such as pizza, macaroni and cheese dinner and canned stew (6 to 16%) (Tables 8a to 8i). Fruits and vegetables were not an important source of calories in most NWT communities. They accounted for only 3 to 6% of energy intake compared to 7% in Fort Severn and 9% in Nain. In Gjoa Haven, the LNV group (mostly soft drinks and fruit drink crystals without vitamin C) was a more important source of energy (26%) than meat, poultry and fish (22%). In Fort Severn, breads and cereals (19% of calories) and dairy products (11%) were a more important source of calories than LNV.

Macronutrients

Protein

Protein is essential for growth and repair of all body tissues and also serves as a source of energy. The traditional diet of the northern Indians and Inuit has always been very high in protein since it was based on wild game, fish and sea mammals. In the traditional diet, protein was thus a much more important source of energy than carbohydrate. While nutrition studies indicate that protein consumption among Inuit has been steadily declining since the 1960s, it is still much higher than in the general Canadian population.

For Inuit women, average protein intakes ranged from 107 grams in Nain to 134 grams in Pond Inlet (1992). These levels are 2 to 3 1/2 times higher than what is considered adequate for optimum growth and repair of body tissues and higher than that reported by the Nutrition Canada survey. The contribution of protein to energy ranged from 17 to 22% for Inuit women, compared to 16 to 17% for Nova Scotia women. This represents a lower protein intake than that found in 1971 in the Nutrition Canada survey. For Indian women, mean protein intake was 96.9 grams in Fort Severn and 185.4 grams in Davis Inlet. Although protein accounted for a lower percentage of calories in Fort Severn than in the Big Trout/Weagamow Lake communities of northern Ontario, this intake is similar to that found among the Cree and Chipewyan in northern Alberta in other studies.

Country food was the most important source of protein in all Inuit communities, accounting for between 46% and 60% of protein intake, considerably lower than that reported by Nutrition Canada. In Davis Inlet, country food was also the most important source of protein, accounting for 42% of protein intake. In Fort Severn, however, store meat was clearly a much

more important source of protein, contributing 47% of total protein intake compared to only 10% from country food. Store meat accounted for 22 to 30% of protein in Nain, Davis, Arctic Bay and Coral Harbour. Breads and cereals provided approximately 10 to 13% of protein in most communities, except Pond Inlet (1992), Arctic Bay and Coral Harbour where they accounted for only 7%. Dairy products consumed through prepared foods such as pizza or macaroni and cheese dinner were a more important source of protein (8 to 11%) in the NWT communities than dairy products bought on their own (1 to 5%). In Fort Severn, on the other hand, dairy products provided 14% of protein intake.

Fat

A high intake of fat, and in particular, of saturated fat, has been linked with an increased risk of heart disease, obesity, gallbladder disease and cancer of the colon, breast and prostate. A high intake of saturated fat and cholesterol has also been associated with high blood cholesterol levels – a risk factor in heart disease. Polyunsaturated fats found in fish and vegetable oils may lower blood cholesterol while omega-3 fatty acids found in fish and sea mammals seem to exert a protective effect through thinning the blood. Canadian nutrition recommendations call for lowering total fat intake to 30% of calories and saturated fat to 10% of calories in order to lower the risk of these diseases. But the traditional Inuit diet, low in saturated fat and high in omega-three fatty acids, does not necessarily carry the same risks and country food is generally lower in fat content than many of the store bought meats. For example, Nutrition Canada in 1971 found a lower fat intake among Inuit than among Indian groups or in the general Canadian population. But as the diet shifts away from country food, this may be changing. In this study, mean fat intake was higher in Inuit communities than levels found by Nutrition Canada, ranging from 64 grams in Nain to 105 grams in Gjoa Haven and contributing 29% of energy in Nain and Repulse Bay, 31% of calories in Pond Inlet (1993) and 34% of energy in Coral Harbour, Gjoa Haven and Pond Inlet (1992). Average fat intake was much higher in Fort Severn (109 grams) and Davis Inlet (157 grams) providing 41 and 42% of calories respectively. Saturated fat provided 10 to 12% of calories among Inuit women and 13 and 15% of calories among Indian women. Dietary cholesterol intake averaged slightly over the recommended maximum of 300 mg per day in most communities. Cholesterol intake declined in Pond Inlet from 1992 to 1993.

The major sources of fat varied by community and amount of country food consumed. Pond Inlet was the only community where country food was the major source of fat, at 22%. Store meat was a more important source of fat than country meat in Arctic Bay, Coral Harbour and Fort Severn, contributing 22 to 55% of fat intake. In Gjoa Haven and Repulse Bay, foods of little nutritional value (mainly potato chips) provided 24 to 27% of total fat, whereas lard was clearly the principal source of fat (36%) in Davis Inlet.

Carbohydrate

While carbohydrate (starch, sugar, fibre) is considered an inexpensive source of energy and an important source of fibre in the diet of most cultures, carbohydrate foods have been a relatively recent introduction to the diet of northern Aboriginal groups. Complex carbohydrates

and fibre have been found protective against heart disease and in southern diets should constitute 50 to 60% of calories.

In most communities, mean carbohydrate intake was between 220 grams and 260 grams per day, contributing 41 to 49% of calories among Inuit women and from 36 to 40% among Indian women. These levels are similar to those reported for Native people in 1971 and lower than current Canadian levels, as reported in the Nova Scotia survey.

Inuit women derive more calories from sugar than Indian women or non-native women. Sugar and high-sugar foods accounted for 18 to 25% of total calories and 42 to 57% of total carbohydrate among Inuit, but only 12% of calories and 35 to 44% of carbohydrate among Indian women.

Breads and cereals were the major source of carbohydrate in Pond Inlet, Repulse Bay, Nain, and Davis Inlet (29 to 48%) while LNV foods (soft drinks, fruit drinks without vitamin C, candy) were the most important source in Arctic Bay, Coral Harbour and Gjoa Haven (33 to 38%) and the second most important source of carbohydrate in other communities (15 to 31%). Non-perishable sweets (sugar and fruit drinks with added vitamin C) contributed an average of 16 to 20% of carbohydrate in most communities. They were a less important source to women in Nain and Arctic Bay (12%). However, these foods accounted for almost one-third of carbohydrate intake in Pond Inlet in 1993.

Fibre plays an important role in regulating the function of the gastrointestinal tract and may be protective against some forms of cancer and heart disease. A diet high in complex carbohydrate would provide approximately 30 grams of fibre. Mean fibre intakes in this study ranged from 5 to 12 grams across communities. Breads and cereals were the major source of fibre, providing one quarter to one half of all fibre intake. Fruits and vegetables, including potatoes, generally provided less than a third, and as little as a tenth, of fibre intake. Convenience foods such as pizza, macaroni and cheese dinner and canned stew were the second most important source of fibre in Gjoa Haven (24%) and Arctic Bay (29%). LNV foods, mainly potato chips, were also a significant source in Gjoa Haven, providing 16% of fibre intake.

Caffeine

Nutrition Recommendations suggest a limit of 320 mg of caffeine per day (the equivalent of four cups of coffee) and moderation (not more than two cups per day) during pregnancy. Average caffeine intakes were generally close to these maximum limits, at about 2 1/2 to 4 cups a day. However, in Repulse Bay and Coral Harbour mean caffeine intakes were extremely high, at 769 mg and 614 mg respectively. Among pregnant and lactating women caffeine intakes were just as high as in the general population.

Alcohol

Very little alcohol was reported, except in Nain. Since so many women were extremely concerned about alcohol and drug abuse, we suspect that its use was under-reported. Part

of the problem regarding frank reporting of alcohol intake is undoubtedly related to the potential in dry communities for fines or imprisonment and public disapproval associated with its use.

Micronutrients

Mean nutrient intake met or exceeded the RNI for most essential nutrients. Notable exceptions were calcium, vitamin A and folacin (Tables 4b and 5b, Figure 3). The means and percentages of nutrients from food groups according to community and perishability is presented in Table 8 and the major sources of calcium, vitamin A and folacin are illustrated in Figures 4 to 6.

Iron

Iron helps to transport oxygen from the blood to all tissues in the body. Iron deficiency results in anemia, causing fatigue, impairing an individual's capacity to learn and work and reducing the ability to resist infection. Inadequate iron stores during pregnancy may make delivery more difficult and reduce oxygen supply to the fetus. Mean iron intake varied widely among communities, but exceeded the RNI in every community. The lowest levels were in Fort Severn (14.5 mg) and Gjoa Haven (17.9 mg) and the highest in Pond Inlet (28.2 mg) and Davis Inlet (29.3 mg). The levels for Inuit women were generally higher than that reported in the Nutrition Canada survey.

Country meat was the major source of iron in most communities contributing 40% to two-thirds of total iron intake except in Fort Severn where store meat (34%) and bread and cereals (29%) were more important sources of iron. Among Inuit women, bread and cereals were not as important a source of this nutrient (12 to 21%). None of the other food groups were important sources of iron except in Gjoa Haven, where miscellaneous foods (chiefly canned stew) contributed 16% of iron to the diet.

Calcium

Calcium is necessary for the normal development of bone and teeth and helps to regulate a number of important body processes, including nerve transmission, blood clotting, muscle contraction and hormone function. Calcium intake varies widely among individuals, ethnic and cultural groups. Frank evidence of deficiency is rare despite low intakes but inadequate calcium intake over a lifetime may increase the risk of postmenopausal osteoporosis. The body can adapt to a wide range of calcium intakes and this capacity is influenced by a number of factors, including physical activity, hormonal influences, protein consumption and the presence of vitamin D. While it is accepted that calcium requirements are higher for pregnancy, lactation and during infancy and adolescence, adult requirements are somewhat controversial. We were unable to calculate intake of Vitamin D in this study as Vitamin D values were missing for a number of country foods.

Mean calcium intakes ranged from 386 mg in Repulse Bay to 774 mg in Fort Severn, representing 55 to 111% of the RNI. For pregnant and lactating Inuit women, calcium intakes

were far below the RNI. Lactating Inuit women met less than 50% of their requirements for calcium. Calcium intakes were significantly lower among women on social assistance and those over the age of 25. There was no significant relationship between calcium intake and education.

Dairy products were the most important source of calcium in Nain, Davis Inlet and Fort Severn (28 to 66%). In the NWT communities, dairy products provided 15 to 32% of calcium. Cheese from miscellaneous foods such as pizza and macaroni and cheese dinner added an additional 9 to 22% of additional calcium in Pond Inlet (1993), Arctic Bay, Coral Harbour and Gjoa Haven. Baking powder (miscellaneous foods) was an important source of calcium in Pond Inlet (1992) and in Davis Inlet (17 and 16% respectively). Sweets (fruit drink crystals with vitamin C) and LNV foods, mainly fruit drink crystals without vitamin C and chocolate bars, contributed about a third of calcium in Pond Inlet in 1993, Gjoa Haven and Repulse Bay and about a fifth of calcium in Coral Harbour and Pond Inlet in 1992. Sweets and foods of little nutritional value were not important sources of calcium in Davis Inlet or Nain (7 to 10%).

Vitamin A

Vitamin A is essential for proper vision, preventing respiratory and urinary tract infections, maintaining healthy skin and a healthy immune system. In addition, vitamin A (or beta carotene) may have a role in preventing certain types of cancer. Vitamin A is found as retinol in dairy products, meat, fish and poultry, eggs and butter and as provitamin A, or carotene, in dark green and orange fruit and vegetables and as an additive in margarine. Vitamin A is measured in Retinol Equivalents (RE). The recommended daily intake for women is 800 RE. This increases to 1200 RE during lactation.

Vitamin A intake averaged below recommended levels in all communities except Davis Inlet. Intakes were especially low in Repulse Bay and in Nain, where they met only 26% and 48% of the RNI respectively. Although there was a marked decline in vitamin A consumption from 1992 to 1993 in Pond Inlet, this difference was not significant ($p=.3$) since the variation in intake is so wide. A paired t-test, however, for the 45 women in Pond Inlet who participated in both surveys and who were neither pregnant nor lactating during either survey, did show a statistically significant decline. A lower consumption of carrots and country food was mainly responsible. Vitamin A intake among all pregnant Inuit women averaged 635 RE and among all Inuit lactating women 644 RE. This level during lactation is just over half the recommended intake.

Country food was the most important source of vitamin A in Pond Inlet and Gjoa Haven, and miscellaneous foods (frozen combination dinners) in Repulse Bay. In both Fort Severn and Davis Inlet women obtained almost no vitamin A from country food. This is particularly surprising in Davis Inlet since they reported a high consumption of country food. However, the country food reported in these communities did not include liver or fish such as char which would be expected to contain vitamin A. Vegetables were the most important source of vitamin A in all other communities, providing from 21% to 39% of dietary intake. In Fort Severn, Davis Inlet and Nain, canned beef stew and canned vegetable soup were the most important sources from this group. Davis Inlet was the only community where store-bought

fat (margarine) was an important source (33%) of vitamin A. Dairy products, including convenience foods such as macaroni and cheese dinner and pizza, were an important source in Arctic Bay and Coral Harbour.

Vitamin C

Vitamin C prevents scurvy and plays an important role in many body processes including the immune system, wound healing and the development of healthy connective tissue. Recommended intakes for women are 30 mg a day, although daily intakes of only 10 mg will prevent scurvy. Since smoking interferes with absorption, an intake 50% higher is recommended among smokers. The average intake in all communities exceeded recommended intakes. However, in Repulse Bay, levels averaged only slightly more than those recommended, and among the small number of pregnant and lactating women, the intake was quite low, averaging only 26 mg/day.

Fruit drink crystals were the most important source of vitamin C for women in most NWT communities (31 to 64%) while citrus fruit and juice were the major sources of vitamin C in Arctic Bay, Nain, Davis Inlet and Fort Severn (31 to 34%). Potato chips provided 12 to 18% of vitamin C in Pond Inlet (1993), Repulse Bay, Gjoa Haven and Davis Inlet.

Folacin

Folacin is required for the normal development of the nervous system, normal growth and reproduction and repair of body tissues and is essential for the normal development of the fetus. Folacin requirements are empirically based, that is, based on values in healthy populations. Recommended levels are 185 mcg/day and increase by 100 mcg per day during lactation and by 200 mcg per day during pregnancy. Lack of folacin during the early part of pregnancy has been linked with low infant birthweight and neural tube defects such as spina bifida. Folate status is negatively affected by smoking, alcohol and drug use and poor eating habits.

Folacin intake was generally low in this study. Recommended intakes were exceeded only in Davis Inlet and Arctic Bay. Intakes for pregnant or lactating women did not even meet the basic RNI, let alone the additional requirements of pregnancy and lactation. Mean folacin intake varied by community. Pond Inlet, Nain and Coral Harbour had similar intakes, ranging from 120 mcg to 140 mcg or approximately 65 to 76% of the RNI for all women (Figure 3). Mean folacin intakes for pregnant Inuit women were only 37% of the RNI. For lactating Inuit, they were approximately half their requirements. Women on social assistance and those over the age of 25 had significantly lower folacin intakes. Low intake was especially marked in Repulse Bay, where intake averaged only 90 mcg/day, and even less among women pregnant or lactating (mean = 57.7 µg, 95.5% confidence intervals: 34.9 – 80.6 µg).

Miscellaneous foods, mostly pizza and tea, contributed 20 to 50% of folacin, except in Coral Harbour, where vegetables were an important source (22%). Breads and cereals generally provided 15 to 25% of folacin. Citrus fruits provided 12 to 18% of folacin in Arctic Bay, Fort Severn, Pond Inlet (1992) and Nain, but only 1% of folacin in Gjoa Haven and Repulse Bay,

5% in Pond Inlet (1993) and Coral Harbour and 6% in Davis Inlet. Outside of Coral Harbour, other fruits and vegetables contributed only 8 to 12% of folacin. Foods of little nutritional value, mostly potato chips, provided over 10% folacin in Pond Inlet, Gjoa Haven and Repulse Bay.

Thiamin, Riboflavin, Niacin and Vitamin B6

The B vitamins are necessary for carbohydrate metabolism and for the health of the nervous system. Deficiencies are rare, but may develop with alcohol abuse. The results of this survey indicate that mean thiamin, riboflavin and niacin intakes in all communities met or exceeded Canadian recommendations. Country meat and store meat were the principal sources of thiamin in all communities except Davis Inlet and Fort Severn, where breads and cereals were a more important source. Country meat and store meat were also the principal sources of niacin and riboflavin everywhere except in Fort Severn. Vitamin B6 is found in a number of foods, including meat. Therefore, the incidence of vitamin B6 deficiency is rare although it may occur with a poor diet or alcohol abuse. Mean intake of vitamin B6 for all women met the RNI. The intakes of pregnant and lactating Inuit women did not meet recommended levels but were not lower than that found in the Nova Scotia survey. Unfortunately, data on the B6 content of a number of country foods is not available so our results underestimate intake. For lactating women, an intake below 2 mg may cause a deficiency in the breast-fed infant resulting in irritability or convulsions. A deficiency of this vitamin is unlikely among Inuit because of their high consumption of meat.

Source of Nutrients: Country vs Store Food

The contribution of country and store foods to energy and essential nutrients is presented in Figure 2 and in Tables 7a and 7b. The average daily intake of country and store meat, fish and poultry is summarized in Table 9.

Based on the 24-hour diet recall, country food was the principal source of protein and iron in all communities except Fort Severn, where perishable foods, predominantly store meat, were a more important source of these nutrients. Country food was the major source of thiamin, riboflavin and niacin in Pond Inlet, Arctic Bay, Coral Harbour and Repulse Bay and an important source of vitamin A in Pond Inlet (38 to 45%), Coral Harbour (28%), Arctic Bay (29%) and Gjoa Haven (30%).

The 24-hour diet recall found a wide variation in mean country food consumption among communities, ranging from a low of 42 grams a day of country food in Fort Severn to 346 grams in Davis Inlet. Country food consumption declined in Pond Inlet between 1992 and 1993 from 330 to 249 grams. Store meat consumption ranged from 62 grams a day in Repulse Bay to 227 grams in Fort Severn.

Store foods were the major source of energy, carbohydrate, fat, calcium, vitamin A, vitamin C, thiamin and folacin. The relative importance of perishables to nutrient intake varied by community and year. In both years, perishables were the main source of vitamin A in all communities except Pond Inlet (1993). Perishable vegetables were the most important source

of this vitamin in all communities and the most important non-country food source in Pond Inlet (1993). Perishable meats were the principal source of energy in Nain, Davis, Fort Severn, Arctic Bay and Coral Harbour (30 to 56%). They were also the major source of fat in all communities except Repulse Bay and Pond Inlet (1993), supplying from 30% of fat in Gjoa Haven to 75% in Fort Severn. Perishable dairy products were the most important source of calcium in Fort Severn, Arctic Bay and Coral Harbour (44 to 51%) and an important source of calcium in other communities. In Nain and Fort Severn, perishables, mostly meat, were a more important source of iron than non-perishable foods (21 and 53% respectively). Arctic Bay was the only community where perishables were the major source of vitamin C. According to the 24-hour diet recall, the contribution of perishables to energy in Pond Inlet declined from 27.6% in 1992 to 18.2% in 1993.

Perishable foods were the major source of folacin in all communities except Repulse Bay and Pond Inlet (1993), with frozen pizza and bread being the main responsible groups in most communities. Perishable citrus was also an important source of folacin in Nain, Arctic Bay and Fort Severn.

Non-perishables were the most important source of energy in Repulse Bay, Pond Inlet, Davis Inlet and Gjoa Haven (30 to 41%). In Pond Inlet, their contribution to energy increased from 30 to 40% between 1992 and 1993. Non-perishable foods were clearly the major source of carbohydrate, supplying from 43% of carbohydrate in Coral Harbour to 61% in Repulse Bay. Non-perishable foods were also the principal source of vitamin C – supplying 46 to 73% of vitamin C in all communities except Arctic Bay. From 14 to 29% of iron intake came from non-perishables.

Foods of little nutritional value were not the major source of any nutrient but they were an important source of energy, carbohydrate and fat in Inuit communities. Total calories supplied by these foods ranged from 17% in Pond Inlet (1992) to 26% in Gjoa Haven. Between 1992 and 1993 the consumption of LNV foods in Pond Inlet increased bringing their contribution to energy from 17% to 22%. Among Inuit women, LNV foods provided 28 to 38% of carbohydrate and 13 to 26% of fat intake. Some nutrients were, however, derived from these foods. In Repulse Bay and Coral Harbour, they provided about a fifth of calcium intake (mainly from fruit drink crystals without added vitamin C) and in Davis Inlet and Pond Inlet they provided about a sixth of vitamin C intake, through potato chips.

It is interesting to note that in most communities women on social assistance consumed about the same percentage of LNV foods as other women. Pond Inlet was the exception. In Pond Inlet, women on social assistance obtained fewer calories from junk foods and more from country food. This difference may have been the result of a policy adopted by the local Cooperative not to allow the use of social assistance cheques for the purchase of junk foods.

Food Frequency Questionnaire

The food frequency questionnaire asked about frequency and amounts of various foods eaten during the previous month. Table 10 presents mean weekly amounts of selected foods. Average daily servings for major food groups are presented in Table 12a. Table 12b gives

mean weekly frequency of consumption of specific food groups. The serving sizes used for specific foods within each food group are provided in Table 11. These serving sizes are not intended to be considered as recommended or ideal portions, but rather a convenient way of comparing quantities of foods consumed.

Country Food

The food frequency questionnaire confirmed a wide variation in the amount and types of country food consumed among communities. The percentage of women who ate country food daily ranged from a low of 12% of women in Gjoa Haven to 56% in Fort Severn, but in most communities, approximately one third reported eating country food every day. Very few women did not eat country food or store meat, poultry or fish in the past month.

In general, the consumption of country food over the previous month agreed with that reported on the 24-hour recall. The exceptions were Davis Inlet, Fort Severn and Gjoa Haven. In both Gjoa Haven and Davis Inlet, women reported a much lower consumption of country meat on the food frequency than in the 24-hour dietary recall. Since the food frequency refers to an entire month and the recall to only one day, the food frequency may give a longer term picture. In Fort Severn, the reverse was true. In Davis Inlet, people had just returned from a caribou hunt, so caribou was very plentiful at the time of the survey, while in Fort Severn, the goose season had just passed so that during the week of the survey women might have been eating less country meat than during the previous month. In Gjoa Haven, people have to travel at least 25 miles by snowmobile to get caribou so the supply of caribou may be interrupted under poor weather conditions, leading to fluctuating consumption.

Average daily intake of fresh and frozen country food (meat, poultry and fish) ranged from a low of 89 grams in Davis Inlet to a high of 334 grams in Fort Severn. Repulse Bay and Pond Inlet reported the highest fish consumption. Dried meat was reported in all communities, but was especially high in Nain and Davis Inlet (Table 10). Dried fish consumption was also highest in Nain and Davis Inlet. Fort Severn, on the other hand, reported a fairly high consumption of dried poultry (99 g/week). We inquired about organ meats only in the second year of the survey. Consumption of organ meats in Pond Inlet and Gjoa Haven was about double that in Arctic Bay.

In NWT communities, the country foods consumed in largest quantity were caribou, seal and Arctic char. Small amounts of polar bear, walrus, ptarmigan and muktuk were also reported. In Nain, the most important country foods were caribou, trout or salmon, ptarmigan, Arctic char, cod and seal. In Davis Inlet, caribou was clearly the main country food, but there was also some consumption of partridge and porcupine.

Store Meat (Meat, Poultry and Fish)

The amount and type of store meat, poultry and fish consumed varied by community. These products were eaten most frequently in Davis Inlet and Nain (1 1/2 servings a day). In other communities, women reported an average of one serving a day. Total mean daily consumption ranged from a low of 73 grams in Gjoa Haven to 125 grams in Pond Inlet in 1993.

The store meats most frequently consumed and eaten in largest quantity were generally low in iron and fairly high in saturated fat. For example, the most important store meat in Pond Inlet and Arctic Bay was frozen breaded fried chicken which was reported an average of at least once a week. Chicken was reported an average of at least once a week in all communities and twice a week in Nain and Arctic Bay. Ground beef (usually only regular ground beef is available) was reported at least once a week by all women. Packaged and canned luncheon meats were reported at least twice a week in Repulse Bay, Davis Inlet, Pond Inlet and Gjoa Haven. Wieners were reported at least once a week in all communities.

Fruit

Fruit consumption was generally low, averaging four to five servings a week. It was highest in Fort Severn (nine servings a week) and lowest in Repulse Bay. In Davis Inlet, 9% of women ate no fruit whatsoever during the previous month. Canned fruit consumption was quite low, averaging less than one serving per week.

Vegetables (excluding potatoes)

Vegetable consumption was low compared to the Nova Scotia population. Total vegetable consumption was highest in Pond Inlet and Arctic Bay and lowest in Repulse Bay and Davis Inlet, but mean consumption ranged from only three to eight servings per week of vegetables other than potatoes. Potatoes added an additional three to seven servings a week. Women in Nain, Pond Inlet, Arctic Bay and Fort Severn reported the most frequent consumption. Less than a third of women in Repulse, Davis and Gjoa Haven reported daily vegetable consumption and, in Davis Inlet and Repulse Bay, 37% and 15% of women ate no vegetables in the previous month. With the exception of Repulse Bay, fresh and frozen vegetables were eaten more frequently than canned.

Since vitamin A (or carotene) is concentrated in a few foods (which are not usually eaten daily), it is possible that a single 24-hour diet recall may underestimate average vitamin A intake. The food frequency questionnaire would indicate that vegetables high in vitamin A, such as carrots, were not eaten frequently in Repulse Bay, Coral Harbour, Gjoa Haven or Davis Inlet. In fact, from 19% of women (Nain) to 60% (Repulse Bay) did not eat carrots in the previous month.

Unfortunately, we do not know how frequently organ meats and fat (country foods high in vitamin A) were consumed in the 1992 survey. In 1993, muktuk, liver and fat from seal, polar bear or walrus were included in the food frequency questionnaire. The results suggest that a high percentage of women did not eat any of these foods. From 41% of women in Coral Harbour to 79% of women in Pond Inlet did not eat muktuk in the past month and more than half did not report liver or fat from seal, polar bear or walrus. In Pond Inlet, only 21% of women reported eating muktuk, 40% liver and 44% fat at least once in the previous month. In Arctic Bay, muktuk, liver and fat were reported at least once by 49%, 27% and 38% of women. In Coral Harbour, the number reporting these foods at least once a month was 59% for muktuk, 42% for liver and 47% for fat.

Potatoes

Respondents ate an average of four servings of potatoes a week. In Fort Severn and Nain, fresh potatoes were reported an average of two and three times a week, compared to only once a week in other communities. Frozen french fries were used more frequently than fresh potatoes in most communities except Nain, Fort Severn and Coral Harbour and instant dried potatoes were more important than fresh or frozen in Repulse Bay, Coral Harbour and Gjoa Haven.

Dairy Products

Total consumption of dairy products was generally low except in Fort Severn and Arctic Bay. Fresh 2% (or UHT) milk was the most important milk product in all communities except Nain and Gjoa Haven where evaporated milk was used more frequently. Skim milk powder consumption was highest in Fort Severn, Arctic Bay and Gjoa Haven. Repulse Bay and Coral Harbour reported the highest and most frequent consumption of artificial coffee whitener, an average of 74 grams and 64 grams per week respectively.

Bread and Cereal Products

While bread and cereal products were important to the diet of most women, very few whole grain products were used. Total bread and cereal consumption averaged five servings a day, based on the food frequency questionnaire. However, the questionnaire did not ask about bannock, and thus underestimates total consumption of this food group. Except in Nain, bannock was a common food on the 24-hour recall and would undoubtedly have been an important food from this group.

Breakfast cereal, plain macaroni and rice were reported an average of once a week in most communities, and macaroni and cheese dinner (e.g., Kraft Dinner) was reported twice a week in Repulse Bay, Pond Inlet, Davis Inlet and Arctic Bay. In most communities, white bread was reported an average of once a day, much more frequently than whole wheat bread. Pilot biscuits were eaten more often in Repulse Bay and Gjoa Haven than in other communities and were seldom reported in Nain, Davis Inlet and Fort Severn.

Fruit Drinks

The high consumption of fruit drinks, especially those without vitamin C, compared to fruit juice undoubtedly contributes to the low folacin intakes found in the 24-hour diet recall. There was a wide range of consumption of fruit drink crystals *without* added vitamin C, averaging from a frequency of once a week in Davis Inlet to 12 times a week in Coral Harbour. The range was somewhat narrower for fruit drink crystals *with* vitamin C, ranging from a low of four times a week in Nain to eight times a week in Repulse Bay. Fruit juice was reported an average of only 0.18 a week in Coral Harbour to 2.19 times a week in Fort Severn.

Sugar and Snack Foods

Sugar consumption, mostly in tea and coffee, was reported most frequently in Repulse Bay and Coral Harbour (30 to 35 times a week), averaging up to 350 grams a week in Repulse Bay. Potato chips were an important snack food, with Arctic Bay, Gjoa Haven and Pond Inlet reporting the most frequent consumption, at an average of three to four times a week. Total consumption of potato chips ranged from a mean of 231 grams a week in Coral Harbour to 381 grams in Fort Severn. Some communities also reported a very high consumption of soft drinks, ranging from a mean of four cans a week in Fort Severn to 22 cans a week in Repulse Bay. Chocolate bars were also reported more frequently in the NWT communities than in Labrador or Fort Severn, at an average of two to four per week.

Fats and Oils

Margarine was seldom used in Pond Inlet and Coral Harbour and was less important than butter in Arctic Bay, Repulse Bay and Fort Severn. Some lard was used as a dip or spread in Repulse Bay, Fort Severn and Nain.

Alcohol

Questions related to alcohol consumption were not asked of most respondents in Gjoa Haven and Coral Harbour since the possession of alcohol is illegal in these communities. Therefore, our results would definitely underestimate usual consumption in both cases. Weekly frequency of alcohol consumption (beer, home brew, wine, liquor) ranged from a low of .07 times per week in Repulse Bay to 1.24 times a week in Nain. Mean weekly beer intake ranged from 3 ml in Fort Severn to 495 ml in Nain. Home brew was reported in Nain, Davis Inlet and Pond Inlet, ranging from a weekly mean of 32 ml in Pond Inlet (1992) to 457 ml in Nain. Home brew consumption in Pond Inlet increased from a weekly average of 32 ml in 1992 to 147 ml in 1993. This trend was also confirmed by local health authorities. Very little wine was consumed but liquor consumption was reported in all communities with a weekly mean ranging from 4 ml in Arctic Bay to 312 ml in Nain.

Pond Inlet 1992-93

In 1993, women in Pond Inlet reported a higher mean consumption of fresh milk, store meat, fresh citrus, fresh fruit, canned fruit, fresh and canned vegetables, non-perishable alternates, pasta, pizza, potato chips and chocolate bars, and a lower consumption of country food, cheese, powdered milk, bread, citrus juice and tomatoes, potatoes, candy and pop.

Comparisons with Previous Year: Changes in Prices, Price Perception and Consumption

Before October 1, 1991, certain northern communities, including the Baffin region of the NWT, northern Quebec, Ontario and Saskatchewan were eligible for "food mail" service. Food was airlifted to these communities at postal rates of \$2.10 per kilogram in NWT, \$0.64 per kg in

northern Quebec and \$0.52 per kg in northern Ontario. On October 1, 1991 the rate for "nutritious perishables" was reduced in the NWT from \$2.10 to \$1.50 per kilogram and all isolated communities became eligible for "food mail". Communities in the Keewatin (Repulse Bay and Coral Harbour) and Kitikmeot regions (Gjoa Haven) of the NWT and northern Labrador began receiving food mail in the winter of 1991-92. In October 1991, the postal rate for nutritious perishables was increased to \$0.75 per kilogram in the provinces and the rate for non-perishables to \$.80 per kilogram. "Foods of little nutritional value", as defined in the 1991 DIAND Communiqué, became ineligible for food mail.

These changes to food mail were expected to result in significant price reductions for nutritious perishable foods (\$.60 per kilogram) in the Baffin. Since the other regions of the NWT and Labrador were not on the system prior to the changes introduced on that date, the exact reduction in food costs and, in particular, in the cost of nutritious perishables, which should have occurred, is difficult to predict. In northern Ontario and Quebec, food prices were expected to increase as a result of higher food mail rates for perishables. Although non-perishable rates also increased in these provinces, this was not expected to contribute to higher food costs, provided that these foods were shipped by sealift or barge.

On October 1, 1992 the rate for "nutritious perishables" was reduced to \$1.20 per kilogram in the NWT and increased to \$.80 per kilogram in the provinces. The rate for non-perishables increased to \$.90 per kilogram in the provinces. A list of the food categories and their respective food mail rates is included in the final report on the food price survey.

This section describes the changes in prices, in price perception and food consumption. Table 13 gives the actual price change for specific foods based on the lowest price in the community. Table 14 shows the changes in consumption from the previous year for country and store bought foods for each of the communities and the actual percentage price change for each store food. Table 15 shows the perceptions of how prices have changed from the previous years. Table 17 shows the changes in the weekly cost of the major food groups, including their perishable and nonperishable components, weighted according to the Northern Food Basket, for this period. Price changes in Davis Inlet and Coral Harbour could not be presented since price surveys were not conducted in these communities in the year prior to the food consumption survey.

For perishable foods, price changes varied by year, community and product. In 1992, Pond Inlet saw the largest price reductions. Fresh fruit prices fell by \$1.75 /kg, fresh/frozen vegetables by \$1.26 /kg, milk by \$.79 a litre and eggs by \$.89 a dozen. In Repulse Bay, there was little change in the price of fresh fruit, fresh/frozen vegetable prices fell by only \$.73 /kg and juice prices increased by \$.88 a litre. In Nain, fresh/frozen vegetables and pizza were the only perishables which substantially declined in price (by \$.50 /kg and \$1.25 per unit). There were marginal reductions in the price of milk and juice and substantial increases in the price of meat, poultry, fish (\$1.00 /kg) and cheese (\$.54 /kg). Fort Severn had a major decrease in the price of fresh fruit (\$2.03 /kg) and moderate decreases in the price of cheese, and pizza. However, prices increased for fresh milk (\$.52 a litre), meat/poultry/fish (\$.80 /kg), fresh/frozen vegetables (\$.12 /kg) and juice (\$.29 a litre).

In 1993, perishable prices continued to fall in the NWT but not to the same extent as in 1992. The major price reductions in Pond Inlet were for meat, poultry and fish (\$1.14 /kg) and fresh milk (\$.38 a litre). Price reductions were applied to a greater range of perishable foods in Arctic Bay than in Pond Inlet, bringing the price of meat and fresh fruit down by \$.94 /kg, and juice by \$.60 a litre. The price of eggs and milk also declined. In Gjoa Haven, meat prices increased by \$1.42 /kg, fresh fruit and fresh/frozen vegetable prices fell by \$.45 and \$.50 /kg respectively and juice prices fell by \$1.12 a litre.

For non-perishables, price changes varied by food product and community. In most communities, except Repulse Bay and Pond Inlet (1992), prices for evaporated milk increased by \$.15 to \$.56 for each 385 ml can. The price of canned luncheon meat and lard also went up in most communities. The price of candy and pop generally remained the same or increased marginally. Most women were unaware of food prices or thought that prices had increased.

Self-reported changes in food consumption varied by product and community. In general, consumers were sensitive to price change. When the price change of specific food products was plotted against changes in consumption (percentage of those who consumed more, minus the percentage who consumed less) across all communities we found a negative correlation of ($r = -0.73$) (Figure 7a). At a community level, the relationships were variable, the strongest correlations being in Pond Inlet in 1993 ($r = -0.66$), Pond Inlet 1992 ($r = -0.34$) (Figure 7b) and Gjoa Haven ($r = -0.27$). In Arctic Bay, Repulse Bay and Fort Severn there was no relationship between price change and self-reported change in consumption. It is important to note that percentage price change was based on the lowest available price for a specific product in the community. Since consumers may shop at either store, this price does not necessarily reflect the actual price paid.

Generally, women increased their consumption of perishables in response to improvements in availability, although "eating better" did influence the consumption of some foods such as fruit, vegetables, milk and juice. Price increase or high cost were the major reasons for eating less. The supply or availability of country food also varied according to community and year. In 1992 a high percentage of women in Repulse Bay, Fort Severn, Arctic Bay and Gjoa Haven reported less caribou than in the previous year (19 to 40%). In all other communities, caribou consumption was higher than in the previous year. From 19 to 56% of women in Inuit communities reported less seal than in the previous year. In Repulse Bay and Pond Inlet (1992), 19% and 26% of women respectively reported eating more char than in the previous year. However, in all other Inuit communities, and in Pond Inlet in 1993, a significant number of women reported less char. This was particularly evident in Nain, Pond Inlet and Gjoa Haven where 32 to 48% reported less char than in the previous year. Changes in availability were the principal reasons for changes in consumption of country foods.

Higher total food costs or higher costs for some essential non-perishable foods may also influence the consumption of nutritious perishable foods. Volume I of this report examines changes to the cost of the Northern Food Basket (NFB) for a family of four. The basket includes 46 foods weighted to reflect food availability, food preferences and the nutrient requirements of a family of this size. This document compares the cost of this basket and the

major food groups, as well as the perishable and non-perishable components, for a number of isolated communities for the period of 1990–93. Tables 17a to 17f present this information for the communities in the nutrition survey. Compared to the previous year, the weekly cost of a nutritious diet declined in all communities except Nain (1992) and Pond Inlet (1993). Pond Inlet (1992) and Repulse Bay saw the greatest decline, but total food costs did decrease in Fort Severn, Arctic Bay and Gjoa Haven. There was little change in the cost of perishables in Fort Severn. Elsewhere, however, reductions in the cost of the perishable component ranged from \$4 in Gjoa Haven and Nain to \$25 in Pond Inlet (1992). Perishables declined by only \$9 a week in Pond Inlet in 1993. The weekly cost of non-perishables increased in all communities except in Repulse Bay, Fort Severn and Pond Inlet in 1992, partially offsetting the lower perishable prices and leading to marginally higher food costs in Nain (1992) and in Pond Inlet (1993). As discussed in Volume 1, the affordability of a nutritious diet for those on social assistance improved marginally in most communities over this period, but the proportion of after-shelter income required to purchase the Northern Food Basket was still 95 to 113% in the NWT communities, 90% in Nain and 78% in Fort Severn for the period of the nutrition survey.

Perceptions About Quality and Variety of Fresh Fruit and Vegetables

The response to this question varied by community and year (Table 16). In 1992, most women in Pond Inlet, Repulse Bay, Davis Inlet and Fort Severn did not know if quality or variety had improved. The majority of women in Nain found no change in quality and less variety. In Pond Inlet, 22% of women reported improvements in quality and 33% improvements in variety. In 1993, most women in Pond Inlet reported no change in quality or variety. While most women in Arctic Bay did not know if quality had improved, 19% found an improvement in variety. Both quality and variety would appear to have improved in Coral Harbour between 1992 and 1993 while less variety of fruit and vegetables in Gjoa Haven was reported during that period.

Supplemental Information on Food Consumption

Attempts to obtain accurate information from retailers concerning the volume of perishable sales over this period were unsuccessful. However, information from Canada Post on the shipments of perishables would strongly indicate a major increase in the volume of perishables shipped to the Baffin following the implementation of Phase I and a substantial reduction in perishable shipments to Fort Severn. For 1992–93, there were also substantial increases noted to the Keewatin and Kitikmeot regions of the NWT and to Labrador.

Discussion

To our knowledge, this is the largest study of the nutritional status of Inuit women in Canada, examining dietary intakes of over 600 Inuit women. We also surveyed two communities of Indian women. While many communities share similar socio-economic problems, each is unique through its geography, employment opportunities, income mix, access to country food and educational levels. Food prices and social assistance rates also vary widely among communities and within regions. Such diversity makes cross-community generalisations difficult at times. At the same time, within communities, the homogeneity of the population can be quite striking. Large numbers of people may be feasting at the same time owing to a good caribou hunt, or may be struggling at the same time of the month, just before social assistance cheques are due. Thus while wide variations may be seen between communities, some of this variation may in fact be what is found within communities over a longer period of time. This should be kept in mind in considering the results of the survey. It is also important to recognize that a nutrition survey can only conclude that a population is at risk when the intake of essential nutrients is markedly less than considered optimum for good health. Firm conclusions regarding the nutritional status and health of the Inuit women in this study would require clinical and biochemical investigation.

The issue of fundamental importance in this study has to be that of food security and the inadequacy of the diet of most women of child-bearing age. Food security, defined as reasonable access to a nutritionally adequate and culturally acceptable diet, was clearly an issue of great concern to many women. The high cost of food, fear over the ability to adequately feed the family, fear over the safety and supply of country food, lack of money to buy food and not having enough to eat were serious problems affecting many Aboriginal families. These problems were most serious among families on social assistance and those with monthly incomes of less than \$2500, which represented a large percentage of our sample. A majority of women reported running out of money to buy food at least twice a month and not having enough to eat in the house in the previous month, and about half were extremely concerned about running out of money to buy food. In Fort Severn, Nain and Davis Inlet, women were especially concerned about not being able to get country food and the safety of the future supply of country food.

Running out of money to buy food was most prevalent among Inuit in the NWT communities where, according to the 1992 Food Price Survey, it required from 101 to 127% of after-shelter social assistance income and 81 to 100% of total minimum wage income to purchase a nutritious diet. In Pond Inlet, almost everyone reported this problem. These results are consistent with the Aboriginal Peoples Survey in 1991, which found running out of money to buy food to be a greater problem among the Inuit in the NWT than among the Inuit of Labrador or among Indians. There were different perceptions of the reasons for this problem. In Nain, most perceived the problem as one of insufficient income while in Repulse Bay, most considered the problem to be one of high food prices. The availability of country food varied widely by community and year and there was evidence that a lack of money for equipment and supplies, or the long distance required to reach hunting areas, made country food

inaccessible to some families and that the supply of country food was less plentiful during freeze-up and breakup periods.

Our survey found food availability a much more widespread problem than was reported in the 1991 Aboriginal People's Survey. It is possible that the nature of our survey elicited a higher response in terms of this issue. But the questions were also phrased differently on the two surveys; Statistics Canada having asked whether not having enough food to eat had been "a problem". We asked how often it occurs, purposely avoiding any phraseology which might be interpreted as a reflection of the individual's inability to provide for the family.

In a discussion of the affordability of a nutritious diet, it is difficult to ignore the amount of money families must be spending on cigarettes – money which could be spent on nutritious foods. No significant relationship could be found between smoking and running out of money to buy food. However, the extremely high prevalence of both smoking and running out of money make such a comparison difficult. Certainly, programs aimed at reducing smoking would not only promote better health, but if successful, would make a significant amount of additional money available for nutritious food. Money spent on gambling or alcohol also leaves less money for food and, according to respondents' comments, contributes to the problem.

The percentage of women who rated their health as only "fair or poor" was much higher than that reported for Inuit adults in the Aboriginal People's Survey despite a lower reported incidence of health problems. However, women generally rate their health less favourably than do men.

Smoking rates among the Inuit were higher than those among women in the lowest socio-economic groups in Canada. These high rates among Inuit have been previously documented in the National Breastfeeding Survey in 1988. Four out of five women are regular smokers. Although heart disease and lung cancer have been traditionally rare among the Inuit, rates are rising as the impact of lifestyle changes is being felt. In addition, the extremely high smoking rates among pregnant and lactating Inuit women increase the risk of low infant birthweight and the risk of respiratory tract infections among infants.

The only major nutrition study to examine a reasonable sample of pregnant Native women was the Nutrition Canada survey in 1971, and their Native respondents were mostly Indian. The present study is to our knowledge the largest nutrition study of Inuit, including 60 pregnant and 115 lactating Inuit. Although sample sizes for pregnant and lactating women are still small for individual communities, the trends are generally similar across communities and the combined sample size is adequate. We found low intakes of calcium, vitamin A and folacin. Unlike other studies, we found adequate iron intake in most communities, the exception being pregnant women in Fort Severn.

Mean calcium intakes among pregnant and lactating women were well below the recommended levels. Calcium intakes were significantly lower among women on social assistance and among women over age 25. Although the significance of a low calcium intake on the health of adult women is controversial, most authorities agree with the need for

additional calcium during adolescence, pregnancy and lactation. Long-standing inadequate calcium intake may also place women at greater risk of postmenopausal bone loss. However, promoting a higher consumption of milk may be inappropriate since many Aboriginal adults are lactose intolerant. Non-dairy traditional sources of calcium, such as cooked dried bones and seaweed, and nontraditional sources such as broccoli, beans or calcium supplements, may be a more feasible way of improving intake.

Folacin intake was very low in Repulse Bay and Coral Harbour, and despite increased requirements, no higher among pregnant and lactating women. Women on social assistance, those with income less than \$2500 a month, and those over age 25 had a significantly lower folacin intake. Since folacin status is also negatively affected by smoking, alcohol and drug abuse and the use of oral contraceptives, many of these women could be at greater risk than the mean intake would indicate.

Folacin deficiencies have also been found in other studies of women in low-income groups. A research project is now underway in the Keewatin to investigate iron deficiency and folic acid deficiency among women of child-bearing age. The importance of folacin in the prevention of neural tube defects is highlighted by the present considerations being given to universal supplementation for women of child-bearing age in the United States and Canada. This is the precise target group of the present survey.

Folacin is found in a number of foods, including country foods such as liver. However, during pregnancy, liver is not recommended due to its high content of vitamin A and its possible teratogenic effects on the fetus. In the North, there is the added concern of high mercury and cadmium levels in the liver of caribou and seal, so liver is not a viable source of this nutrient during pregnancy. Recommended intakes of folacin during pregnancy are difficult to achieve through diet alone. Supplements are then usually recommended. But supplements do not solve the problem since the damage caused to the fetus is determined by folate status prior to conception and in the first 28 days of pregnancy. Therefore, access to folacin-rich foods by women of child-bearing age prior to pregnancy is critical to the health of the fetus.

Folacin-rich store foods include beans, peas and lentils, sunflower seeds and vegetables such as asparagus, spinach, broccoli, corn, romaine, and orange fruits such as oranges, orange juice and cantaloupe. Fresh or frozen fruit and vegetables are a much better source of folacin than canned because folacin is easily destroyed during high temperature processing. Although the variety of fruit and vegetables has improved in most communities it is still quite limited. Small changes in food purchasing choices can radically alter folacin intake. For example, one serving of frozen orange juice provides 64% of the daily adult requirement while a serving of canned apple juice has only a trace of folate and a serving of canned orange juice only 27% of the RNI. Most fruit drink crystals contain no folacin. Unfortunately, in most communities these beverages are consumed much more frequently than fruit juice. In some cases fruit drink crystals are actually more expensive than frozen orange juice, but most women in this survey were not aware of food prices and many perceived these products as "too expensive". Other foods which could be an inexpensive source of folacin include beans, peas and lentils. However, these foods, especially in the dry form, are not commonly found in most communities except in Labrador, partly because they can be used to prepare home

brew. Canned beans, while available, are not commonly used. Whole grain bread and cereals are also not as frequently consumed as bannock or white bread further reducing folacin intake. The present trend toward cooking meat rather than eating it raw as was traditionally done, would further reduce folacin intake.

Vitamin A intake was also below recommended levels among pregnant and lactating women – a finding that is consistent with other studies on Aboriginal women. Although it is difficult to accurately assess vitamin A intake from a single dietary recall because of its concentration in a limited number of foods, this result is corroborated by the food frequency questionnaire which showed low consumption of vegetables high in vitamin A (carrots, broccoli) and organ meats. A low intake of vitamin A is believed to decrease immunocompetence and to be a major factor in the higher morbidity and mortality of developing countries. It could also partly explain the higher risk of lung cancer and infectious diseases in isolated Inuit communities. Country food sources of vitamin A include liver, muktuk and fat from seal, polar bear, beluga and narwhal. But again, liver is not an appropriate source during pregnancy. Store foods which are important sources include dark green leafy vegetables (e.g. spinach, broccoli and romaine), deep orange vegetables (e.g. carrots, squash), peaches, cantaloupe, milk, cheese, butter, margarine and eggs. However, it is important to note that there is very little variety of vitamin A-rich foods available in most communities and, in some communities, the price of some of these foods is considered a barrier.

The high consumption of sugar, soft drinks and fruit drink crystals without vitamin C found in the Inuit communities is a nutritional and health concern. These foods provide very few other essential nutrients, often replace more nutritious foods and leave less money available for more nutritious choices. In addition, the high sugar intake undoubtedly contributes to dental decay. If fruit were eaten more frequently as a snack, the diet would contain more fibre and essential vitamins and minerals. The high consumption of high-fat snack foods, such as potato chips and chocolate bars, adds saturated fat to the diet. In excess, this can lead to higher blood cholesterol and promote heart disease. Dry meat or fish or unsalted nuts would be a more nutritious snack choice. In Gjoa Haven, 61% of families who reported running out of money to buy food were also consuming more than 400 calories a day in foods of little nutritional value.

The high consumption of sugar and junk foods by this population and by other low-income groups as been reported in other studies. Many factors contribute to this situation. In the traditional society, there was no need to consider the nutritional merits of food since country food was all healthy. This attitude toward food together with limited literacy in English and lack of knowledge concerning nutrition, may make it more difficult for some to differentiate between store foods on the basis of their nutritional value. In addition, country food is in some ways "convenience food" being eaten raw, requiring little preparation time beyond the time spent hunting. With no traditions or skills for cooking, the transition from country food is more easily made to convenience food and junk food. Food also satisfies emotional as well as physical needs. The frustration of an inadequate income and a lack of employment opportunities, limited food choices and limited alternatives for satisfying emotional needs may increase the need to use nutritionally inferior snack foods.

Monetary incentives may also work to encourage or discourage consumption of junk food. In the course of the community consultations, it was discovered that some retailers in the NWT do not charge social assistance recipients GST on junk food if they have accounts with their store – a practice which would encourage the consumption of junk foods by this group. At one time people on social assistance could not purchase junk food or cigarettes with their cheque. This is no longer the case in most communities. In fact, to our knowledge, the Pond Inlet Co-op is the only store whose board has taken a decision not to allow social assistance payments to be used for the purchase of these items. This policy has resulted in lower consumption of these foods by those on social assistance compared to others in the community.

Pond Inlet and Nain were the only two communities where the mean BMI was within Canadian guidelines. BMI was especially high in Repulse Bay, Davis Inlet, Fort Severn and Gjoa Haven and fat provided more than 40% of energy in Davis Inlet and Fort Severn. Saturated fat was also higher in the Indian communities than in the Inuit, and cholesterol intake was very high in Davis Inlet. Comparing these results to other nutrition surveys, one can see that fat intakes among the general Canadian population have been declining over the last 20 years, but that this may not be the case among Indians. Fat intakes are quite similar to those found among Indians in the 1971 Nutrition Canada Survey.

Dependence on store food is a fairly recent phenomenon in Inuit communities. The extent to which store foods are used depends on many factors including access to country food, the cost of store food and food preferences. Now, however, store food is a major source of energy, fat, carbohydrate, calcium, vitamin A, vitamin C and folacin. The importance of perishable foods to nutrient intake varies by community, but in most communities, perishables were the major source of vitamin A. Country food is still very important to northern families. In most communities, the exception being Fort Severn, country food is the principal source of protein and iron and therefore, continues to make a major contribution to nutritional health and well-being. However, access to country food varies widely among communities. Consumption has declined from earlier reports and there are serious concerns over its continued supply and safety. Furthermore, this access requires a considerable investment in time and equipment as well as the development of skills. Further declines in the supply of country food or trends away from country food by the younger generation could further jeopardize nutrition and health.

In both Fort Severn and Davis Inlet, there was a difference between the amount of country food reported on the 24-hour diet recall and the food frequency questionnaire, which estimated consumption during the previous month. In Fort Severn, women reported much less country food in the 24-hour diet recall than during the previous month, while in Davis Inlet, the reverse was true. Our nutrient analysis is based on the 24-hour diet recall. However, actual nutrient intake will depend on which pattern is more characteristic. If the food frequency questionnaire is more typical of usual eating patterns, fat and iron intake may be less of a problem in Fort Severn than our results would suggest. Similarly in Davis Inlet, fat intake would be less than that reported on the 24-hour diet recall. Since country food consumption tends to be seasonal, another 24-hour diet recall would provide a better assessment of dietary intake in these communities.

The changes to the air stage subsidy affected food prices and likely also consumption patterns. However, not all the changes could be directly measured since there was no baseline information on consumption for any community in the survey. In the first survey year, Pond Inlet was the only community included in the nutrition survey where changes in food prices were expected to result in significant price reductions for perishable foods. We did find that a substantial number of women in Pond Inlet reported having increased their consumption of meat, fruit, fresh and frozen vegetables, pizza, milk and juice in the year prior to the survey. However, without a baseline survey, we could not compare the results directly through a dietary recall. The reported increases in consumption were in foods in which price reductions were substantial, in the order of 20 to 40%. However, when asked the reasons for making the changes, women cited greater availability or a "desire to eat better" rather than lower prices as the reasons. They also reported improvements in both quality and variety of fruit and vegetables during that period. These changes in food consumption were corroborated by the experience of retailers. Since these changes would lead to higher intakes of nutrients such as folacin, calcium and vitamin A, they would be important to continue.

In Phase II of the subsidy changes, prices of perishable goods were only expected to fall by \$0.30 per kilogram in NWT. In Pond Inlet, these relatively minor changes in the price of perishables, compared to their total cost, were accompanied by substantial increases in the cost of non-perishables, with resulting rises in total food costs. It is hard to predict what changes in consumption should result from these price changes. And indeed, results were mixed. Reports from retailers and Canada Post Corporation indicate a major increase in the shipment and sale of perishables in this community over this period. The food frequency questionnaire also shows trends towards higher consumption of a number of perishables including meat, fresh milk, fruit, fresh and frozen vegetables and pizza compared to the previous year. The question on changes in consumption also indicated that of those women who changed their consumption of fresh fruit and vegetables, pizza and store meat, more increased consumption than decreased it. And the 24-hour diet recall suggests greater consumption of milk, fresh fruit and pizza. However, the 24-hour recall showed that total consumption of perishables was lower than in the previous year. This was predominantly due to a decrease in store bought meat, which, despite lower meat prices, may have been deemed less affordable since total food costs were up. Both the 24-hour recall and the food frequency found a lower consumption of country food and a higher consumption of junk food compared to the previous year. However, for the group as a whole the only nutrient that significantly differed between the two years was cholesterol, which decreased from 431 mg in 1992 to 331 mg in 1993. This would be in line with decreases in country food consumption.

There are several possible explanations for the mixed findings in the second year of the Pond Inlet survey. First, it may be unreasonable to expect any major improvements in the consumption of perishables in 1993 in response to the marginal price decreases in perishables, especially when accompanied by increased total food costs. Second, it is possible that the 24-hour recall was not typical in terms of normal food consumption patterns. The second survey was carried out in the latter part of the month when social assistance benefits would have been largely spent. In addition, we were advised by health authorities that the community had recently been traumatized by a series of violent deaths from suicide and accidents and that alcohol and drug abuse had been on the increase, all of which may

have affected short term food consumption patterns. Third, there were indications in the community pointing toward a general deterioration in socio-economic conditions in 1993 – lower family income, heavier smoking, greater degree of concern over alcohol and drug abuse, more families reporting not enough to eat in the house and women spending less time on the land. Such factors would also be expected to affect food consumption patterns.

Other communities were only surveyed at one point in time, so that the only indications of differences between years were from the questions inquiring as to changes in consumption in the previous year. The fact that changes in consumption were positively correlated with price change, even though increases in consumption were not attributed to price reductions, demonstrates that northern consumers are price sensitive and that price reductions did have the intended effect. In addition, some comparisons are possible across communities which experienced different changes to the cost to a nutritious diet. However, other community factors may play a role here, so interpretation must be cautious. For example, in Arctic Bay and Gjoa Haven, the cost of a nutritious diet declined between 1992 and 1993 due to reductions in the cost of nutritious perishable foods. Perishable prices declined to a much greater extent in Arctic Bay than in Pond Inlet or Gjoa Haven over this period and this difference would appear to have resulted in a noticeable increase in consumption of meat, juice and fresh vegetables among women in Arctic Bay. Arctic Bay also had the highest consumption of dairy products and citrus and the highest intake of calcium and folacin of all NWT communities. However, one cannot attribute all the improved nutrition to the subsidy changes since women in Arctic Bay also enjoyed higher family income, lower dependence on social assistance and more full-time, year-round employment.

In some communities, changes to the subsidy did not have the effect hoped for. For example, in Repulse Bay most women reported eating the same amount or less of most foods except pizza. However, at the time of the survey, only one retailer was using the "food mail" service and prices had not declined to the same extent as in Pond Inlet.

That there was this much sensitivity to price increases was all the more remarkable since most women seemed unaware of food prices or had the impression that prices had increased, when the opposite was true. This lack of awareness may be due to a lack of food purchasing or budgeting skills but it may also be the result of current retail pricing policies, which fail to clearly indicate food prices on individual food items or to advertise price reductions. Alternatively, women may not be responding to price changes, but rather to the secondary effects of those changes, such as the greater variety of fresh produce, better quality and more prominent displays.

It is important to remember that the cost of the Northern Nutritious Food Basket is calculated by using the lowest price for each food in the community. All communities in the nutrition survey except Nain and Davis Inlet (with one each) had two food stores. Therefore, in order to get the best price, consumers would have to compare prices in both stores. Those families who have established a credit arrangement with one store or who have their social assistance cheque sent to a particular store may not be in a position to do comparative shopping. Adverse weather conditions and store loyalty would also play a role in the choice of where to shop.

Health care costs for nutrition-related disease are a major expenditure in the North. Since well-focussed nutrition education programs can lead to improvements in nutrient intake, a nutrition education program could be expected to result in improvements to health and, in the long term, savings to the health care system.

Conclusions

1. There are a number of serious nutritional concerns for women of child-bearing age, and in particular for those who are pregnant or lactating in all of the communities in this survey. Low intakes of calcium, vitamin A and folacin, especially among pregnant and lactating women, place many women at risk. Women on social assistance had a significantly lower intake of folacin and calcium, increasing their risk of nutrient deficiencies, poor health and the risk of low-birthweight infants. The low consumption of organ meats, vegetables, fruit and dairy products makes it difficult for many women to meet their nutrient requirements.
2. Food security is a serious issue for many families especially for those on social assistance and those with a low family income. Low income levels, high food costs, high unemployment, the inability to afford a nutritious diet on social assistance, reduced access to country food in some communities and a concern over the safety of country food contribute to this lack of food security.
3. The high consumption of foods of little nutritional value and the high smoking rates in most communities are a nutritional and health concern.
4. Although a survey at a single point in time cannot provide conclusive evidence on the impact of price changes, this study would indicate that consumers will increase their consumption of nutritious food in response to price reductions, provided there is sufficient price change. It also suggests that price can be a barrier to the consumption of certain nutritious foods and that other factors such as income level, dependence on social assistance, alcohol and drug abuse and availability of country food also affect food consumption patterns and nutrient intake.
5. Further improvements in nutritional status might occur if families were better versed in budgeting and food purchasing skills, nutrition and cooking and if there was greater access to country food. A greater commitment on the part of retailers to promote "nutritious food" and to clearly post prices on individual food items would also help to educate northerners in the purchase and use of new foods. A long-term nutrition education program targeted at women of child-bearing age and developed through the cooperative efforts of retailers, health authorities, educational and social assistance representatives would probably have the greatest success in improving the nutritional status of this group. However, nutrition information alone may not substantially improve the situation if this food consumption pattern, like alcohol and drug abuse, is symptomatic of deeper social problems.

General Conclusions and Recommendations: Air Stage Monitoring Program

The air stage subsidy has made nutritious foods more affordable in isolated communities and reductions in the rate for perishable nutritious foods in the NWT has improved accessibility to essential nutrients for women of child-bearing age. Increases in the cost of some perishables in Labrador and Ontario would appear to have reduced their consumption and to increase the risk of nutrient deficiencies. Despite improvements in the price of perishable foods, nutritional problems still remain, especially for pregnant and lactating women and families on social assistance.

If the air stage subsidy were phased out, food prices, the cost of a nutritious diet and access to essential nutrients such as folacin, vitamin A and calcium would be seriously impaired in all isolated communities. Such a move would be most punitive for communities such as Pond Inlet or the communities of northern Quebec, where air cargo rates are extremely high, causing a significant increase in the cost of a nutritious diet and a potential deterioration in nutritional status and health. The higher cost of fresh and frozen vegetables and fruit would likely result in lower consumption of these foods, lowering folacin intakes and increasing the risks of low birthweight and neural tube defects.

Recommendation #1. That, at a minimum, the Government of Canada retain the air stage subsidy at its current level and continue to favour nutritious perishable foods in order to prevent any further deterioration in nutritional status and health of women of child-bearing age and their families and to maintain any nutritional benefits which may have resulted to date.

Recommendation #2. That the Department of Indian Affairs and Northern Development distribute this report to health and social assistance representatives at the federal, provincial and territorial level to encourage initiatives which will ensure adequate access to a nutritious diet for women of child-bearing age and encourage the development of social assistance scales based on the cost of a nutritious diet.

In view of the rapidly expanding population in the North, the persuasive effect of television on eating habits and the increasing cost of non-perishable food, the demand for nutritious perishables can be expected to increase. This may lead to an erosion of any benefits achieved by changes to the postal rates for nutritious perishables.

Recommendation #3. That the Air Stage Subsidy be indexed to population growth in isolated communities.

Food prices in general and the savings realized by retailers through lower food mail rates were passed on to consumers where effective competition existed. Therefore, it is essential that every effort be made to preserve competition in isolated communities. In Fort Severn, higher prices for some nutritious perishable foods (meat, milk and fresh/frozen vegetables) did

appear to result in a lower consumption of these foods. Planned increases in the rates for non-perishables in the provinces may lead to much higher food costs in these communities and to greater nutritional problems if smaller retailers or cooperatives lack adequate financing to accommodate large sealift orders. The effect would be more severe in those communities without access to sealift/barge service or winter roads.

Recommendation #4. *That no further increases be made to the rates for non-perishables in the provinces until retailers have assured access to adequate financing and that both perishables and non-perishables be permitted at the same rate in communities lacking access to sealift/barge service or winter roads.*

In some communities ground transportation costs from airports into the community add a considerable amount to the cost of nutritious perishable foods.

Recommendation #5. *To make it more likely that all communities would have equal access to perishable items in a nutritious diet, it is recommended that excessive ground transportation costs in communities such as Arctic Bay, Coral Harbour and Black Lake be covered through the air stage subsidy program.*

The manner in which the subsidy was applied varied according to community and retail outlet so that access to certain nutrients continued to vary widely among communities. Furthermore, many women were demonstrated to be at risk for calcium, vitamin A and folacin and in some communities, to have higher than desirable levels of fat, saturated fat and sugar in their diet. Such nutrient deficiencies may be contributing to ill-health and low infant birthweight while excessive intake of some nutrients is increasing the risk of chronic diseases.

Recommendation #6. *That the subsidy be further targeted to favour foods that are good or excellent sources of calcium, vitamin A and folacin as well as those that are lower in fat, saturated fat and sugar. This should be done in consultation with Aboriginal groups and this effort should be combined with a consumer education program in cooperation with Aboriginal groups, retailers, schools, health and social assistance representatives.*

Access to country food is essential for both cultural survival and health but access depends to some extent on the cost and availability of hunting and fishing supplies. Clothing, certain personal care products and medicine are also essential to survival in the North. Other non-food items could be considered less essential and could be shipped by sealift or air cargo.

Recommendation #7. *To ensure that necessary items are available at reasonable cost and that the best possible use is made of the subsidy, it is recommended that non-food items, except hunting and fishing supplies, clothing, essential personal care products which cannot be efficiently sent by sealift and medicine, no longer be considered eligible for subsidized postal rates.*

Not all retailers are using the food mail program and this is an important factor in the high cost of food in some isolated communities such as Old Crow in the Yukon.

Recommendation #8. *That the Department of Indian Affairs and Northern Development and/or Canada Post Corporation encourage communities not using the food mail service to do so.*

Decisions regarding the future of the subsidy will have a major impact on many sectors and programs, including the consumer, the retailer, airlines, health and social assistance programs, economic development plans, programs to promote or protect wildlife, regional interests, etc. In many cases, there may have to be tradeoffs between regions if the program is to achieve its objective of assuring equal access to a nutritious diet. If these decisions are to have widespread support and cooperation from these widely divergent interest groups, it is important that they have input into the policy development and implementation of the food mail program.

Recommendation #9. *That the Department of Indian Affairs and Northern Development establish an advisory committee to advise on the best use of the subsidy and to ensure that savings from postal rate changes are passed on to consumers.*

The food price surveys conducted as part of the Air Stage Monitoring Program have provided the Department of Indian Affairs and Northern Development with a means of monitoring changes to the air stage subsidy in order to determine if savings were being passed on to consumers. The calculation of the cost of the Northern Nutritious Food Basket enabled a comparison of the cost of a nutritious diet and therefore, a means of evaluating the impact of changes to the subsidy on the availability of essential nutrients and the affordability of a nutritious diet for those on social assistance and earning minimum wage. This information has been shared with retailers, community representatives and health representatives, increasing the visibility of the federal government and the possibility that the savings would be passed on. Information gathered on food consumption patterns would suggest some modification to the weighting of foods in the Northern Food Basket in order to more accurately reflect food consumption patterns.

Recommendation #10. *That the Department of Indian Affairs and Northern Development continue to conduct food price surveys in air stage communities on an annual basis in order to ensure that savings are being passed on and that the subsidy is having the intended effect on nutrition and health.*

Recommendation # 11. *That the Department of Indian Affairs and Northern Development continue to calculate the cost of the Northern Nutritious Food Basket in order to determine the impact of the subsidy on nutrient intake of high risk groups and to update the basket to reflect the most current information on food consumption patterns of Northerners.*

Phase II was fully implemented on July 1, 1993 bringing the rate for nutritious perishables in the NWT down to \$.80 per kilogram plus \$.75 per parcel. Surveys conducted in November and December of 1993 in a few Inuit communities found a substantial reduction in the cost of perishable foods. Such a decrease should result in improvements in nutrient intake especially in communities such as Repulse Bay, while increases in the rates of non-perishables in the provinces may have the opposite effect.

Recommendation #12. *That a nutrition survey be repeated in a minimum of two communities within two years in order to monitor the impact of the postal rate changes introduced in July 1993, assuming that no further rate changes occur.*

Recommendation #13. *Because of the wide variation among communities in food prices, social assistance rates and availability of country food, a nutrition survey be conducted in other selected air stage communities to determine nutritional status and the effectiveness of the program.*

Food security is the result of a complex interplay of many factors including the supply and safety of country food and store food, income, education, cultural values, food transportation costs and food prices. These factors are affected by programs and decisions made by government bodies at all levels. If northern Canadians are to achieve optimum health and well-being and to improve their socio-economic status, they must develop policies and programs that promote assured access to a safe and healthy food supply.

Recommendation #14. *That the Department of Indian Affairs support the initiatives of Aboriginal groups and those of Health Canada to promote country food consumption and through their advisory committee, examine the feasibility of establishing a Northern Nutrition Council to address the broader issue of food security in isolated communities.*

The monitoring program would be more effective if food price surveys could be carried out more frequently. However, to ensure accurate results, price surveyors require a certain level of training. If surveys could be conducted by local people, they could be carried out more frequently and the community would have more ownership over the results.

Recommendation #15. *That the Department of Indian Affairs and Northern Development create a pilot project to examine the feasibility of training community representatives to conduct regular food price surveys.*

Many women were unaware of food prices. Perishable prices were not clearly posted in most stores and some retail outlets had installed or were in the process of installing a computer pricing program which uses shelf labels rather than price stickers on individual food items. Since food security is such a serious issue in the North and price comparison essential to optimum money management and nutrition, any retail policy which would facilitate this process would be helpful.

Recommendation #16. That the Department of Indian Affairs and Northern Development encourage retailers to use price stickers on individual food items and more clearly post prices for perishable foods or request the Government of the Northwest Territories to adopt consumer protection legislation similar to that in effect in Quebec which requires that each item carry a price sticker.

Data on the vitamin A, vitamin E, vitamin D, polyunsaturated and omega-3 fatty acid content of some country foods are not currently available. While imputed values may be used, it is not possible to accurately assess nutrient intake and to fully determine the full contribution of country food to nutritional status.

Recommendation #17. That the Department of Indian Affairs and Northern Development encourage Health Canada to conduct analysis of important country foods for which nutrient data (i.e. content of vitamins A, D and E, and fatty acids) are missing in order to permit a more accurate assessment of the nutritional significance of country foods.

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Appendix I

Tables

Table 1. Summary of socio-demographic information

	Repulse Bay	Nain	Davis Inlet	Fort Severn	Pond Inlet 1992	Pond Inlet 1993	Arctic Bay	Coral Harbour	Gloa Haven
Number respondents	62	114	57	48	116	123	74	78	121
Native group:	100%	86.8	0	0	100	98.4	100.00	97.4	98.4
Inuit	0	0.9	100	0	0	0	0	0	0
Innu	0	11.4	0	0	0	0	0	0	0
Settler	0	0	0	93.8	0	0	0	0	0
Cree	0	0	0	6.3	0	1.6		2.6	1.7
Other	0	0.9	0						
Mean age	26.1 yrs.	29.2	24.8	26.8	25.5	26.4	26.9	25.6	24.7
Marital status:	59.7%	64.0%	70.2%	56.3%	71.6%	66.4%	71.6%	55.1%	60.8%
Married or living as couple	38.7	29.0	17.5	37.5	27.6	31.0	25.7	44.9	37.5
Never married/not living as couple	0	5.3	1.8	4.2	0.9	.9	2.7	0	1.7
Divorced/separated	1.6	0.9	8.8	2.1	0	1.8	0	0	0
Widowed									
Highest level of education completed	4.8%	1.8%	12.3%	2.1%	2.6%	4.1%	24.3%	1.3%	15.8%
No formal education	83.9	28.3	15.8	10.4	31.6	47.1	52.7	58.4	63.3
Elementary school	9.7	45.1	63.2	62.5	59.7	38.8	12.2	33.3	14.2
Some high school	0	13.3	5.3	18.8	2.6	4.1	2.7	2.6	3.3
Completed high school	1.6	10.6	1.8	6.3	3.5	5.0	5.4	3.9	2.5
Some college or university	0.0	0.9	1.8	0.0	0.0	0.8	2.7	0.0	0.8
Adult upgrading (unspecified)									
Other training	48.4	49.1	15.8	56.3	47.4	45.0	40.9	33.3	70.8
Mean number family members working	1.4	1.3	1.5	1.7	1.3	1.7	1.4	1.7	1.4
Employed (%)	40.3	50.0	50.9	50.0	37.9	40.8	34.3	39.7	22.7

	Repulse Bay	Nain	Davis Inlet	Fort Severn	Pond Inlet 1992	Pond Inlet 1993	Arctic Bay	Coral Harbour	Gloa Haven
Type of employment: (Total N)									
Full/Year/Round (%)	(24) 58.3	(57) 61.4	(29) 51.7	(24) 66.7	(44) 52.3	(49) 40.8	(25) 72.0	(29) 44.8	(27) 40.7
Full /Seasonal (%)	12.5	14.0	27.6	16.7	9.1	16.3	4.0	0	7.4
Part Time/Year Round (%)	20.8	19.3	17.2	8.3	29.6	28.6	16.0	41.4	37.0
Part-Time/Seasonal (%)	8.3	5.3	3.5	8.3	9.1	14.3	8.0	13.8	14.8
Received social assistance last month (N)									
%	(61) 38.7	(114) 29.0	(57) 40.4	(48) 60.4	(110) 48.2	(120) 47.5	(72) 43.1	(77) 53.3	(111) 55.1
Received Unemployment Insurance in last month(%)	39.3	54.4	47.4	27.1	14.7	11.6	8.2	27.3	14.4
Total family income last month:									
\$0 - \$499	8.1%	7.0%	10.5%	2.1%	6.9%	12.0%	11.1%	3.9%	23.3%
\$500-\$999	14.5	23.7	19.3	2.1	8.6	25.6	16.7	16.9	34.2
\$1000-\$1499	22.6	14.0	8.8	16.7	17.2	21.4	15.3	24.7	21.7
\$1500-\$1999	14.5	19.3	5.3	14.6	6.9	12.0	5.6	11.7	5.8
\$2000-\$2499	11.3	9.7	5.3	16.7	6.0	6.8	11.1	10.4	2.5
\$2500 and over	16.1	16.6	1.8	41.8	18.2	8.6	20.9	22.3	5.8
Don't Know	11.3	9.7	49.1	6.3	36.2	13.7	19.4	10.4	6.7

*Excludes family allowance and child tax credit

Table 2. General health and lifestyle

	Repulse Bay	Nain	Davis Inlet	Fort Severn	Pond Inlet 1992	Pond Inlet 1993	Arctic Bay	Coral Harbour	Gjoa Haven
Number of respondents	62	114	57	48	116	123	74	78	121
Personal assessment of health									
Mean ratings (scale 1 to 5)	2.64	2.83	2.39	2.98	3.07	2.77	2.62	3.14	3.02
Excellent (1)	21.0%	11.4%	33.3%	12.5%	11.2%	15.5%	24.3%	5.1%	5.0%
Very good (2)	19.4	19.3	8.8	14.6	12.9	17.1	13.5	12.8	8.3
Good (3)	37.1	46.5	45.6	37.5	37.1	43.9	39.2	48.8	66.9
Fair (4)	19.4	20.2	10.5	33.3	33.6	22.0	21.6	29.5	19.8
Poor (5)	3.2	2.6	1.8	2.1	4.3	1.6	1.4	3.9	0.0
Mean BMI (kg/m ²)	26.6	24.8	30.4	29.8	25.1	24.6	25.2	26.9	28.3
Health problems	8.1	14.9	12.3	22.9	15.5	10.6	2.7	18.0	14.9
Pregnant	8.0	7.3	12.3	10.4	7.8	12.2	2.7	3.9	15.1
Breastfeeding	9.7	10.9	8.9	25.0	29.7	22.5	13.5	21.1	11.5
Smokers									
Current smokers	75.8	78.1	84.2	47.9	88.5	78.9	86.5	79.5	67.8
Ex-Smokers	1.6	2.6	0.0	33.3	4.3	3.3	2.7	11.5	5.0
Never smoked	22.6	19.3	15.8	18.8	6.9	17.9	10.8	9.0	27.3
Mean age started smoking	14 yrs.	13.8	14.4	14.6	12.1	11.7	13.9	13.7	14.3
# Cigarettes/day									
<11	57.5	42.9	81.3	78.3	51.5	40.0	79.7	73.3	73.2
11-24	34.0	46.4	18.7	13.0	38.6	46.3	18.8	18.3	22.0
25+	8.5	10.7	0.0	8.7	9.9	13.7	1.6	8.3	4.9

	Repulse Bay	Nain	Davis Inlet	Fort Severn	Pond Inlet 1992	Pond Inlet 1993	Arctic Bay	Coral Harbour	Gjoa Haven
Extremely concerned about:									
Alcohol /drug abuse	9.7%	37.7%	47.4%	33.3%	27.6%	30.3%	20.3%	20.5%	17.7%
Not having enough money for food	40.3	51.8	50.9	39.6	42.2	55.7	37.0	47.4	34.4
Not being able to get country food	9.7	29.8	40.4	31.3	12.1	8.2	9.5	9.0	21.9
The safety of country food	17.7	36.8	35.1	33.3	14.7	13.1	13.7	18.0	21.9
Family violence	12.9	57.0	49.1	52.1	31.0	27.1	24.7	28.2	22.9
Activity level in the village									
Usually sit during day, do not walk around	14.5	15.8	50.0	22.9	15.8	14.8	18.9	10.3	13.2
Stand, walk quite a lot, no heavy loads	54.8	36.0	12.5	43.8	39.5	36.9	24.3	50.0	51.2
Lift / carry light loads, climb hills, stairs	17.7	21.1	3.6	8.3	24.6	34.4	33.8	26.9	28.1
Do heavy work or carry heavy loads	6.5	21.1	25.0	20.8	9.7	4.1	12.2	5.1	4.1
Don't know/No response	6.5	6.1	8.9	4.2	10.5	9.8	10.8	7.7	3.3
Time spent on land in last year (%)									
None	30.7	39.5	43.9	66.7	29.31	59.0	43.2	24.4	25.2
< 1 month	40.3	36.0	24.6	43.8	47.1	27.9	40.5	47.4	47.1
1 month	16.1	9.7	17.5	6.3	9.48	9.0	12.2	15.4	18.5
2 -3 months	11.3	7.9	8.7	4.2	10.34	3.3	4.1	11.5	8.4
4-5 months	1.6	3.5	1.8	2.1	0.86	.8	0.0	1.3	.8
≥ 6 months	0.0	2.6	3.6	4.2	1.72	0.0	0.0	0.0	0.0
Activity level on the land (%)									
Usually sit during day, do not walk around	0.0	7.3	18.8	12.5	9.8	6.0	0.0	0.0	4.6
Stand, walk quite a lot, no heavy loads	69.8	31.9	15.6	43.8	34.2	36.0	22.0	50.9	48.9
Lift / carry loads, climb hills	20.9	33.3	15.6	0.0	31.7	42.0	43.9	39.6	40.9
Heavy work / carry heavy loads	7.0	15.9	43.8	37.5	19.5	6.0	29.3	3.7	3.4
Don't know	2.3	11.6	3.1	6.3	4.9	10.0	4.9	5.7	2.3

Table 3. Food purchasing practices and food security.

	Repuise Bay	Nain	Davis Inlet	Fort Severn	Pond Inlet 1992	Pond Inlet 1993	Arctic Bay	Coral Harbour	Gloa Haven
Number respondents	62	114	57	48	116	123	74	78	121
Generally buy food for household (%)	74.2	77.2	87.7	79.2	62.9	57.5	63.0	77.0	70.8
Most people in community can afford to buy enough food to feed their families (Total N)	(55)	(96)	(52)	(36)	(82)	(100)	(50)	(68)	(75)
Agree (%)	41.8	44.8	76.9	30.6	29.3	29.0	46.0	26.5	33.3
Disagree (%)	58.2	55.2	23.1	69.4	70.7	71.0	54.0	73.5	66.7
Most families are able to have country food year round (Total N)	(55)	(94)	(52)	(38)	(81)	(104)	(51)	(67)	(74)
Agree (%)	60.0	76.6	92.3	68.4	86.4	94.2	70.6	89.6	71.6
Disagree (%)	40.0	23.4	7.7	31.6	13.6	5.8	29.4	10.5	28.4
Grocery expenses (\$/last month)	\$1360.13	\$369.78	\$268.15	\$975.00	\$928.68	\$992.45	\$1127.06	\$1056.90	\$629.47
Adults eating in house (mean)	4.2	2.7	4	3.1	3.4	3.2	3.0	3.2	3.4
Children eating in house (mean)	4.1	2.8	3.5	2.6	3.4	3.1	3.0	3.2	2.7
Not enough to eat last month (Total N)	(54)	(100)	(52)	(38)	(81)	(103)	(51)	(63)	(94)
	66.7	43.0	51.9	39.5	54.3	68.0	49.0	60.3	58.5
Ran out of money for food (Total N)	(54)	(100)	(52)	(38)	(83)	(103)	(51)	(68)	(94)
%	98.2	64.0	82.7	68.4	85.5	88.4	76.5	80.9	80.9
Ran out of money for food in past year (based on household which ran out) (N)	(45)	(56)	(38)	(22)	(61)	(78)	(36)	(55)	(72)
< 1x month (%)	4.4	10.7	0.0	22.7	14.8	6.4	2.8	9.1	2.8
1x month (%)	33.3	26.8	36.8	45.5	16.4	24.4	30.6	38.2	33.3
2-4x month (%)	48.9	55.4	63.2	22.7	52.5	61.5	55.6	50.9	61.1
> 4x month (%)	13.3	7.1	0.0	9.1	16.4	7.7	11.1	1.8	2.8

	Reputse Bay	Nain	Davis Inlet	Fort Severn	Pond Inlet 1992	Pond Inlet 1993	Arctic Bay	Coral Harbour	Gjoa Haven
Reasons for running out of money									
Not working	19.4%	9.7%	19.3%	18.8%	13.8%	33.3%	46.2%	30.9%	57.9%
Waiting for UI or social assistance Not enough income	0	21.1	19.3	6.3	0	17.8	17.9	24.6	42.1
Spent money on cigarettes	27.4	26.3	15.8	43.8	26.7	34.4	43.6	21.8	38.1
Food costs too much	8.1	0	24.6	0	7.8	12.2	5.1	1.8	17.1
	58.1	10.6	31.6	35.4	31.9	55.6	82.1	47.3	85.5
Do when run out of money									
Ask social assistance for more money	8.1%	7.0%	36.9%	8.3%	12.0%	34.1%	35.9%	1.8%	27.6%
Ask store manager for more credit	67.7	14.0	3.5	35.4	14.7	40.7	38.5	12.7	76.3
Borrow food from family / friends	46.7	48.3	70.2	31.2	34.5	42.9	43.6	58.2	84.2
Go hunting or fishing	16.1	8.8	35.0	20.9	14.7	15.4	35.9	16.4	28.9
Make carving or craft to sell	17.8	6.1	0	2.1	9.5	14.3	10.3	12.7	21.1
Do without	3.2	16.7	10.5	16.7	11.2	7.8	20.5	9.1	50.0
Other	0	0	0	6.3	16.0	16.5	7.7	38.2	7.9
Able to get country food year round						89.4%	84.3%	86.8%	52.1%
Why can't get country food year round									
Have to travel too far						14.3%	16.7%	0	76.9%
Can't go hunting at breakup or freeze-up						14.3	0	0	23.1
No hunter in family						0	0	16.7	15.4
Hunter working, no time to hunt						0	33.3	16.7	43.6
Don't have snowmobile						14.3	50.0	33.3	23.1
Can't afford gas for snowmobile						28.6	0	0	59.0
Snowmobile is broken/breaks down						28.6	16.7	0	20.5
Other						42.9	16.7	33.3	0

Table 4a. Mean macronutrient intake as a percentage of RNI for all women, by community

Nutrient Intake 1992	RNI	Repulse Bay		Pond Inlet		Nain		Davis Inlet		Fort Severn	
		Mean Intake	% RNI	Mean Intake	% RNI	Mean Intake	% RNI	Mean Intake	% RNI	Mean Intake	% RNI
N		62		116		114		57		48	
Calories	1900.0	2015.2	106%	2147.4	113%	1970.2	104%	3415.9	180%	2296.6	121%
			% of calories		% of calories		% of calories		% of calories		% of calories
Protein (g)	51.0	110.1	22%	133.6	25%	107.2	22%	185.4	22%	96.9	17%
Carbohydrates (g)		246.5	49%	221.1	41%	232.0	47%	309.5	36%	232.5	40%
Fat (g)		64.7	29%	84.6	35%	64.1	29%	157.0	41%	108.5	42%
Saturated Fats (g)		23.4	10%	26.1	11%	20.9	10%	48.3	13%	37.3	15%
Cholesterol (mg)		282.3		431.0		352.5		831.7		418.1	
Fibre (g)		5.1		7.0		6.8		12.0		7.3	

Nutrient Intake 1993	RNI	Arctic Bay		Pond Inlet		Coral Harbour		Gloja Haven	
		Mean Intake	% RNI	Mean Intake	% RNI	Mean Intake	% RNI	Mean Intake	% RNI
N		74		123		78		121	
Calories	1900.0	2176.5	114%	2156.5	113%	2297.5	121%	2758.5	145%
			% of calories		% of calories		% of calories		% of calories
Protein (g)	51	119.1	22%	112.2	21%	115.2	20%	116.7	17%
Carbohydrates (g)		237.9	44%	260.9	48%	267.0	46%	340.8	49%
Fat (g)		85.7	35%	74.5	31%	87.6	34%	105.4	34%
Saturated Fats (g)		26.4	11%	22.1	9%	29.9	12%	30.7	10%
Cholesterol (mg)		375.6		331.7		339.7		371.2	
Fibre (g)		8.3		8.0		8.2		9.7	

Source: Health and Welfare Canada. Nutrition Recommendations. Report of the Scientific Review Committee, Ottawa, 1990.

Table 4b. Mean micronutrient intake as a percentage of RNI for all women, by community

Nutrient Intake 1992	RNI	Repulse Bay	Pond Inlet	Nain	Davis Inlet	Fort Severn
		Mean Intake	Mean Intake	Mean Intake	Mean Intake	Mean Intake
		% RNI	% RNI	% RNI	% RNI	% RNI
Iron (mg)	13.0	24.3	28.2	20.7	29.3	14.5
Calcium (mg)	700.0	385.7	488.2	406.1	639.2	773.9
Vitamin A (RE)	800.0	208.3	692.6	387.9	1317.6	610.8
Vitamin C (mg)*	45.0	49.8	82.5	92.8	76.4	80.7
Folacin (µg)	185.0	90.1	131.2	140.2	215.9	172.4
Thiamin (mg)	0.8	1.2	1.5	1.3	2.3	1.1
Niacin (NE)	13.7	42.9	49.3	39.7	68.0	36.0
B12 (µg)	1.0	11.3	14.8	10.9	19.3	4.8
B6 (mg)	0.8	1.0	1.4	1.3	2.2	1.5
Caffeine (mg)		769.0	324.6	264.2	212.0	331.2

Nutrient Intake 1993	RNI	Arctic Bay	Pond Inlet	Coral Harbour	Gjoa Haven
		Mean Intake	Mean Intake	Mean Intake	Mean Intake
		% RNI	% RNI	% RNI	% RNI
Iron (mg)	13.0	22.7	29.3	20.8	17.9
Calcium (mg)	700.0	520.1	474.0	541.4	758.3
Vitamin A (RE)	800.0	654.7	519.5	511.6	643.5
Vitamin C (mg)*	45.0	67.1	58.6	76.6	161.8
Folacin (µg)	185.0	198.0	141.3	119.9	165.7
Thiamin (mg)	0.8	1.4	1.5	1.6	1.8
Niacin (NE)	13.7	49.3	46.7	48.4	50.2
B12 (µg)	1.0	13.2	14.0	13.5	14.5
B6 (mg)	0.8	1.5	1.3	1.5	1.6
Caffeine (mg)		284.0	415.7	614.2	331.3

*Includes additional requirement for smokers

Table 5a. Mean macronutrient intake of pregnant and lactating women as a percentage of RNI, for Inuit communities

Nutrient Intake		Pregnant			Lactating		
	RNI	Mean Intake	SE*	% RNI	RNI	Mean Intake	SE*
N		60				115	
Calories	2200.0	2375.0	147.0	108%	2350.0	2341.9	129.9
				% of calories			% of calories
Protein (g)	75	110.1	12.1	19%	73	130.2	9.3
Carbohydrates (g)		309.0	23.9	52%		256.6	15.5
Fat (g)		77.2	6.0	29%		91.9	7.9
Saturated Fats (g)		25.8	2.0	10%		27.5	1.9
Cholesterol (g)		332.6	43.5			404.1	33.8
Fibre (g)		8.0	0.8			7.9	0.7

Table 5b. Mean micronutrient intake of pregnant and lactating women as a percentage of RNI, for Inuit communities

Nutrient Intake	Pregnant				Lactating				
	RNI	Mean Intake	SE*	% RNI	RNI	Mean Intake	SE*	% RNI	
Iron (mg)	23.0	24.7		4.0	108%	13.0	28.9	2.9	222%
Calcium (mg)	1200.0	658.4	69.0	69.0	55%	1200.0	560.9	41.9	47%
Vitamin A (RE)	800.0	635.1	161.9	161.9	79%	1200.0	644.4	143.3	54%
Vitamin C (mg)**	55.0	117.1	20.2	20.2	213%	70.0	93.6	12.2	134%
Folicin (µg)	385.0	141.5	16.5	16.5	37%	285.0	152.5	12.3	54%
Thiamin (mg)	0.9	1.4	0.1	0.1	160%	0.9	1.6	0.1	178%
Niacin (NE)	17.0	43.6	4.4	4.4	257%	17.0	51.3	3.5	302%
B12 (µg)	1.2	11.1	2.4	2.4	927%	1.2	14.8	1.7	1234%
B6 (mg)	1.65	1.3	0.1	0.1	79%	1.95	1.4	0.1	72%
Caffeine (mg)		345.2	59.9				349.5	36.4	

* Standard error of the mean.

****Includes additional requirement for smokers**

Table 6a. Means of macronutrients from country and store foods, by community, in 24-hour recall

Community	Category	Calories	Protein	Carbohydrates	Fat
			g	g	g
Repulse Bay	Perishable	355.9	21.5	25.4	18.4
	Nonperish	832.5	15.3	150.7	19.2
	LVN	453.5	6.9	69.7	17.1
	Country	373.3	66.4	0.6	9.8
Nain	Perishable	668.8	39.9	53.2	32.5
	Nonperish	585.9	13.6	108.4	10.6
	LVN	411.2	3.3	70.2	11.2
	Country	304.3	50.4	0.2	9.9
Davis Inlet	Perishable	1439.3	77.4	79.7	89.4
	Nonperish	1182.2	25.4	183.0	38.9
	LVN	313.4	4.1	46.6	12.7
	Country	480.9	78.5	0.1	16.1
Fort Severn	Perishable	1292.1	66.8	71.6	81.3
	Nonperish	716.3	18.5	119.5	18.7
	LVN	233.2	1.7	41.4	7.0
	Country	55.1	9.8	0.0	1.5
Pond Inlet 1992	Perishable	593.6	38.3	46.0	28.3
	Nonperish	646.8	12.1	112.8	16.9
	LVN	365.6	3.2	62.1	12.0
	Country	541.4	80.1	0.2	27.3
Pond Inlet 1993	Perishable	392.1	22.6	33.3	18.7
	Nonperish	872.4	17.8	148.3	23.1
	LVN	465.4	4.8	79.2	15.0
	Country	426.6	67.0	0.0	17.7
Arctic Bay	Perishable	714.2	45.7	48.6	37.1
	Nonperish	654.5	15.4	109.9	17.4
	LVN	421.8	3.4	79.4	10.8
	Country	386.0	54.6	0.0	20.3
Coral Harbour	Perishable	680.5	38.0	49.8	36.5
	Nonperish	661.8	14.9	115.1	16.4
	LVN	542.1	4.0	102.0	14.2
	Country	413.0	58.3	0.0	20.5
Gjoa Haven	Perishable	627.9	32.7	52.2	32.0
	Nonperish	986.2	19.9	173.5	23.8
	LVN	711.5	7.1	115.1	24.9
	Country	432.8	57.0	0.0	24.8

Table 6b. Means of micronutrients from country and store foods, by community, in 24-hour recall

Community	Category	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
		mg	mg	RE	mg	mg	mcg
Repulse Bay	Perishable	95.9	2.2	131.3	7.6	0.3	32.1
	Nonperish	172.9	4.1	48.6	31.4	0.4	34.1
	LNV	88.0	1.5	14.1	5.8	0.1	13.9
	Country	28.9	16.5	14.3	4.9	0.5	10.0
Nain	Perishable	146.7	4.4	250.9	31.5	0.5	67.0
	Nonperish	176.0	4.1	91.9	49.9	0.4	59.2
	LNV	57.4	1.0	20.2	9.8	0.1	7.5
	Country	25.9	11.3	24.9	1.6	0.4	6.5
Davis Inlet	Perishable	258.2	7.7	1223.9	26.3	0.9	98.9
	Nonperish	271.7	7.0	77.7	35.2	0.7	96.6
	LNV	44.7	0.9	8.5	12.7	0.1	9.0
	Country	64.6	13.6	7.5	2.2	0.7	11.4
Fort Severn	Perishable	391.3	7.7	459.8	35.1	0.6	84.7
	Nonperish	333.6	4.2	137.6	39.7	0.4	83.4
	LNV	41.7	0.6	13.3	5.9	0.0	2.9
	Country	7.3	2.0	0.0	0.0	0.1	1.4
Pond Inlet 1992	Perishable	192.1	3.6	332.3	26.9	0.5	66.5
	Nonperish	198.3	3.9	89.0	47.3	0.4	42.9
	LNV	54.1	0.9	11.4	7.3	0.1	10.5
	Country	43.7	19.8	259.9	1.0	0.6	11.4
Pond Inlet 1993	Perishable	163.9	2.3	163.7	16.6	0.2	47.4
	Nonperish	202.3	5.8	101.7	29.1	0.6	68.4
	LNV	72.5	1.4	21.1	10.5	0.1	16.2
	Country	35.2	19.9	232.9	2.4	0.6	9.3
Arctic Bay	Perishable	241.5	4.4	355.1	38.2	0.5	116.1
	Nonperish	178.7	4.3	88.4	20.7	0.4	59.0
	LNV	71.5	1.1	20.8	6.6	0.1	10.9
	Country	28.4	12.9	190.3	1.6	0.4	12.0
Coral Harbour	Perishable	237.2	3.6	260.9	16.6	0.6	56.1
	Nonperish	183.8	4.4	91.8	50.4	0.4	41.8
	LNV	94.2	1.2	16.4	7.2	0.1	10.1
	Country	26.1	11.6	142.5	2.5	0.5	11.8
Gjoa Haven	Perishable	244.2	3.6	297.1	20.6	0.4	81.5
	Nonperish	366.0	5.2	131.4	117.7	0.6	53.5
	LNV	107.2	1.9	21.7	21.9	0.1	16.6
	Country	40.9	7.2	193.4	1.6	0.6	14.2

Table 7a. Percentage of macronutrients from country and store foods, by community, in 24-hour recall

Community	Category	Calories	Protein	Carbohydrates	Fat
Repulse Bay	Perishable	17.7	19.5	10.3	28.5
	Nonperish	41.3	13.9	61.1	29.7
	LNV	22.5	6.2	28.3	26.5
	Country	18.5	60.3	0.2	15.2
Nain	Perishable	33.9	37.2	22.9	50.7
	Nonperish	29.7	12.7	46.7	16.5
	LNV	20.9	3.1	30.3	17.4
	Country	15.4	47.0	0.1	15.4
Davis Inlet	Perishable	42.1	41.7	25.8	56.9
	Nonperish	34.6	13.7	59.1	24.8
	LNV	9.2	2.2	15.1	8.1
	Country	14.1	42.3	0.0	10.3
Fort Severn	Perishable	56.3	69.0	30.8	75.0
	Nonperish	31.2	19.2	51.4	17.2
	LNV	10.2	1.8	17.8	6.5
	Country	2.4	10.1	0.0	1.3
Pond Inlet 1992	Perishable	27.6	28.6	20.8	33.5
	Nonperish	30.1	9.0	51.0	20.0
	LNV	17.0	2.4	28.1	14.3
	Country	25.2	60.0	0.1	32.3
Pond Inlet 1993	Perishable	18.2	20.1	12.8	25.1
	Nonperish	40.5	15.9	56.9	31.0
	LNV	21.6	4.3	30.4	20.1
	Country	19.8	59.7	0.0	23.8
Arctic Bay	Perishable	32.8	38.3	20.4	43.3
	Nonperish	30.1	13.0	46.2	20.3
	LNV	19.4	2.9	33.4	12.7
	Country	17.7	45.8	0.0	23.7
Coral Harbour	Perishable	29.6	33.0	18.7	41.6
	Nonperish	28.8	12.9	43.1	18.8
	LNV	23.6	3.5	38.2	16.3
	Country	18.0	50.6	0.0	23.4
Gjoa Haven	Perishable	22.8	28.0	15.3	30.4
	Nonperish	35.8	17.0	50.9	22.6
	LNV	25.8	6.1	33.8	23.6
	Country	15.7	48.8	0.0	23.5

Table 7b. *Percentage of micronutrients from country and store foods, by community, in 24-hour recall*

Community	Category	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Repulse Bay	Perishable	24.9	9.0	63.0	15.3	21.9	35.6
	Nonperish	44.8	16.9	23.3	63.1	30.8	37.8
	LNV	22.8	6.3	6.8	11.7	9.4	15.5
	Country	7.5	67.8	6.9	9.9	37.9	11.1
Nain	Perishable	36.1	21.1	64.7	34.0	38.3	47.8
	Nonperish	43.3	19.9	23.7	53.7	29.7	42.2
	LNV	14.1	4.6	5.2	10.5	4.6	5.3
	Country	6.4	54.4	6.4	1.8	27.4	4.7
Davis Inlet	Perishable	40.4	26.2	92.9	34.5	37.3	45.8
	Nonperish	42.5	24.0	5.9	46.1	29.4	44.7
	LNV	7.0	3.2	0.6	16.6	4.1	4.2
	Country	10.1	46.5	0.6	2.9	29.2	5.3
Fort Severn	Perishable	50.6	53.1	75.3	43.5	51.2	49.1
	Nonperish	43.1	29.1	22.5	49.2	37.5	48.4
	LNV	5.4	4.3	2.2	7.3	3.3	1.7
	Country	0.9	13.5	0.0	0.0	8.1	0.8
Pond Inlet 1992	Perishable	39.3	12.8	48.0	32.6	30.5	50.7
	Nonperish	40.6	13.7	12.8	57.3	25.3	32.7
	LNV	11.1	3.3	1.6	8.9	3.5	8.0
	Country	9.0	70.2	37.5	1.2	40.7	8.7
Pond Inlet 1993	Perishable	34.6	7.8	31.5	28.4	16.5	33.6
	Nonperish	42.7	19.7	19.6	49.6	40.4	48.4
	LNV	15.3	4.7	4.1	18.0	5.3	11.5
	Country	7.4	67.8	44.8	4.0	37.9	6.6
Arctic Bay	Perishable	46.4	19.4	54.2	56.9	37.5	58.6
	Nonperish	34.4	18.8	13.5	30.9	26.9	29.8
	LNV	13.7	4.7	3.2	9.8	4.6	5.5
	Country	5.5	57.1	29.1	2.4	31.0	6.1
Coral Harbour	Perishable	43.8	17.1	51.0	21.6	37.1	46.8
	Nonperish	34.0	21.2	17.9	65.7	26.8	34.9
	LNV	17.4	6.0	3.2	9.4	4.2	8.4
	Country	4.8	55.7	27.8	3.3	31.9	9.9
Gjoa Haven	Perishable	32.2	19.9	46.2	12.7	24.4	49.2
	Nonperish	48.3	29.3	20.4	72.7	32.8	32.3
	LNV	14.1	10.7	3.4	13.5	7.0	10.0
	Country	5.4	40.1	30.1	1.0	35.9	8.6

Table 8a. Nutrients from food groups, Repulse Bay: means

Food Group	Perish/non	Calories	Protein	Carbohydrates		Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
			g	g	g	g	mg	mg	RE	mg	mg	mcg
Dairy	Perishable	38.0	1.4	3.2	2.3	45.2	0.0	24.7	0.2	0.0	0.0	1.1
Dairy	Non-perish	7.2	0.4	0.5	0.4	13.8	0.0	2.8	0.8	0.0	0.0	0.4
Eggs	Perishable	7.3	0.6	0.1	0.5	2.4	0.1	9.3	0.0	0.0	0.0	1.7
Meat	Perishable	155.2	15.1	1.1	9.6	10.8	1.1	4.3	0.0	0.1	0.1	4.9
Meat	Country	373.3	66.4	0.6	9.8	28.9	16.5	14.3	4.9	0.5	0.5	10.0
Alternates	Perishable	6.0	0.2	0.1	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.5
Alternates	Non-perish	19.2	0.7	0.1	1.7	0.3	0.0	0.0	0.1	0.0	0.0	0.3
Breads	Perishable	53.4	1.7	9.8	0.7	13.3	0.5	0.1	0.0	0.1	0.1	6.6
Breads	Non-perish	333.2	9.4	61.3	5.1	36.9	2.5	2.7	0.1	0.3	0.3	11.5
Citrus	Perishable	1.0	0.0	0.2	0.0	0.8	0.0	0.4	1.1	0.0	0.0	0.6
Citrus	Non-perish	0.2	0.0	0.0	0.0	0.2	0.0	0.6	0.1	0.0	0.0	0.0
Fruit	Perishable	11.6	0.2	2.8	0.1	1.7	0.0	6.1	2.1	0.0	0.0	1.5
Fruit	Non-perish	2.6	0.0	0.7	0.0	0.6	0.0	2.2	0.0	0.0	0.0	0.0
Potatoes	Perishable	24.3	0.4	4.0	0.8	1.2	0.1	0.0	1.3	0.0	0.0	1.9
Potatoes	Non-perish	10.2	0.2	1.4	0.4	4.8	0.0	3.6	1.5	0.0	0.0	0.7
Vegetables	Perishable	3.7	0.2	0.8	0.0	2.9	0.1	43.4	1.7	0.0	0.0	3.1
Vegetables	Non-perish	1.4	0.0	0.4	0.0	0.1	0.0	0.3	0.1	0.0	0.0	0.9
Fats	Perishable	14.3	0.0	0.0	1.6	0.5	0.0	16.1	0.0	0.0	0.0	0.0
Fats	Non-perish	86.9	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sweets	Non-perish	280.0	0.2	71.8	0.0	34.3	0.1	0.1	26.4	0.0	0.0	0.2
Misc	Perishable	41.2	1.8	3.2	2.3	16.8	0.2	26.8	1.1	0.0	0.0	10.0
Misc	Non-perish	91.5	4.3	14.4	1.9	81.9	1.4	36.3	2.4	0.1	0.1	19.9
LNV	all groups	453.5	6.9	69.7	17.1	88.0	1.5	14.1	5.8	0.1	0.1	13.9
Total		2015.2	110.1	246.5	64.7	385.7	24.3	208.3	49.8	1.2	1.2	90.1

Percentages

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perishable	1.9	1.2	1.3	3.5	11.7	0.1	11.9	0.4	0.8	1.3
Dairy	Non-perish	0.4	0.3	0.2	0.6	3.6	0.0	1.4	1.6	0.2	0.4
Eggs	Perishable	0.4	0.6	0.0	0.8	0.6	0.3	4.5	0.0	0.2	1.9
Meat	Perishable	7.7	13.7	0.5	14.8	2.8	4.4	2.1	0.1	11.1	5.5
Meat	Country	18.5	60.3	0.2	15.2	7.5	67.8	6.9	9.9	37.9	11.1
Alternates	Perishable	0.3	0.2	0.0	0.8	0.1	0.1	0.0	0.0	0.1	0.5
Alternates	Non-perish	1.0	0.7	0.0	2.7	0.1	0.2	0.0	0.1	1.7	0.4
Bread & Cereals	Perishable	2.6	1.5	4.0	1.1	3.4	2.0	0.0	0.0	4.4	7.3
Bread & Cereals	Non-perish	16.5	8.5	24.9	7.9	9.6	10.3	1.3	0.2	22.3	12.7
Citrus	Perishable	0.0	0.0	0.1	0.0	0.2	0.0	0.2	2.3	0.1	0.7
Citrus	Non-perish	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.1
Fruit	Perishable	0.6	0.1	1.1	0.2	0.4	0.2	2.9	4.2	1.2	1.7
Fruit	Non-perish	0.1	0.0	0.3	0.0	0.1	0.1	1.0	0.1	0.1	0.0
Potatoes	Perishable	1.2	0.4	1.6	1.3	0.3	0.6	0.0	2.7	1.3	2.1
Potatoes	Non-perish	0.5	0.2	0.6	0.7	1.2	0.1	1.7	3.0	1.3	0.8
Vegetables	Perishable	0.2	0.1	0.3	0.0	0.8	0.3	20.8	3.4	0.5	3.4
Vegetables	Non-perish	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.0	1.0
Fats	Perishable	0.7	0.0	0.0	2.5	0.1	0.0	7.7	0.0	0.0	0.1
Fats	Non-perish	4.3	0.0	0.0	14.9	0.0	0.0	0.0	0.0	0.0	0.0
Sweets	Non-perish	13.9	0.2	29.1	0.0	8.9	0.4	0.0	52.9	0.3	0.2
Misc	Perishable	2.0	1.6	1.3	3.6	4.4	1.0	12.9	2.3	2.2	11.1
Misc	Non-perish	4.5	3.9	5.9	2.9	21.2	5.7	17.4	4.7	4.9	22.1
LNV	All groups	22.5	6.2	28.3	26.5	22.8	6.3	6.8	11.7	9.4	15.5
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8b. Nutrients from food groups, Nain: means

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
			g	g	g	g	mg	RE	mg	mg	mcg
Dairy	Perishable	32.9	2.0	1.1	2.3	60.3	0.0	27.1	0.1	0.0	1.3
Dairy	Non-perish	44.5	2.2	3.3	2.5	85.7	0.1	17.8	5.3	0.0	2.6
Eggs	Perishable	22.1	1.8	0.2	1.5	7.2	0.2	27.3	0.0	0.0	5.5
Meat	Perishable	262.9	25.7	3.6	15.5	19.9	2.0	19.3	0.9	0.2	9.3
Meat	Non-perish	3.5	0.2	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0
Meat	Country	302.4	50.4	0.2	9.6	25.8	11.3	19.5	1.6	0.4	6.5
Alternates	Perishable	22.7	1.2	0.2	1.9	0.8	0.2	0.0	0.0	0.0	0.5
Alternates	Non-perish	10.7	0.5	0.9	0.6	1.2	0.1	0.2	0.0	0.0	1.5
Breads	Perishable	88.2	2.9	16.4	1.2	22.8	0.8	0.3	0.0	0.1	11.0
Breads	Non-perish	299.0	8.3	57.8	2.7	19.8	2.8	0.0	0.0	0.3	12.7
Citrus	Perishable	22.5	0.3	5.4	0.0	5.0	0.1	5.1	19.3	0.0	20.7
Citrus	Non-perish	34.9	0.4	8.5	0.1	9.2	0.4	20.7	21.2	0.0	4.2
Fruit	Perishable	3.2	0.0	0.8	0.0	0.4	0.0	0.3	0.3	0.0	0.2
Fruit	Non-perish	2.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Potatoes	Perishable	77.0	1.4	14.6	1.6	5.1	0.4	0.0	5.7	0.1	6.9
Potatoes	Non-perish	9.9	0.3	1.3	0.4	6.7	0.0	4.4	1.4	0.0	0.7
Vegetables	Perishable	19.5	0.5	3.2	0.6	7.3	0.1	86.2	2.6	0.0	5.1
Vegetables	Non-perish	3.8	0.2	0.8	0.0	1.3	0.1	13.2	0.4	0.0	2.5
Fats	Perishable	30.3	0.1	0.0	3.4	0.9	0.0	32.0	0.0	0.0	0.1
Fats	Non-perish	28.5	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0
Fats	Country	1.9	0.0	0.0	0.2	0.0	0.0	5.4	0.0	0.0	0.0
Sweets	Non-perish	110.8	0.0	28.4	0.0	26.6	0.0	0.0	20.6	0.0	0.1
Misc	Perishable	87.7	4.1	7.6	4.5	17.1	0.6	53.3	2.5	0.1	6.5
Misc	Non-perish	38.3	1.5	6.9	0.8	25.1	0.7	35.6	0.9	0.0	34.9
LNV	all groups	411.2	3.3	70.2	11.2	57.4	1.0	20.2	9.8	0.1	7.5
Total		1970.2	107.2	232.0	64.1	406.1	20.7	388.0	92.8	1.3	140.2

Percentages

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perishable	1.7	1.9	0.5	3.5	14.8	0.2	7.0	0.1	0.6	0.9
Dairy	Non-perish	2.3	2.1	1.4	3.9	21.1	0.3	4.6	5.7	1.1	1.8
Eggs	Perishable	1.1	1.7	0.1	2.3	1.8	1.0	7.0	0.0	0.6	3.9
Meat	Perishable	13.3	24.0	1.6	24.1	4.9	9.6	5.0	1.0	16.4	6.7
Meat	Non-perish	0.2	0.2	0.0	0.4	0.0	0.1	0.0	0.0	0.4	0.0
Meat	Country	15.3	47.0	0.1	15.0	6.4	54.4	5.0	1.8	27.4	4.7
Alternates	Perishable	1.2	1.1	0.1	2.9	0.2	0.8	0.0	0.0	1.0	0.3
Alternates	Non-perish	0.5	0.5	0.4	0.9	0.3	0.5	0.0	0.0	0.5	1.1
Bread & Cereals	Perishable	4.5	2.7	7.1	1.8	5.6	4.0	0.1	0.0	6.8	7.8
Bread & Cereals	Non-perish	15.2	7.7	24.9	4.1	4.9	13.4	0.0	0.0	22.2	9.1
Citrus	Perishable	1.1	0.3	2.3	0.1	1.2	0.3	1.3	20.8	2.9	14.8
Citrus	Non-perish	1.8	0.4	3.7	0.2	2.3	1.8	5.3	22.8	2.2	3.0
Fruit	Perishable	0.2	0.0	0.3	0.0	0.1	0.0	0.1	0.4	0.1	0.2
Fruit	Non-perish	0.1	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Potatoes	Perishable	3.9	1.3	6.3	2.6	1.2	1.8	0.0	6.2	4.7	4.9
Potatoes	Non-perish	0.5	0.3	0.6	0.7	1.6	0.1	1.1	1.5	1.1	0.5
Vegetables	Perishable	1.0	0.4	1.4	1.0	1.8	0.7	22.2	2.8	1.1	3.6
Vegetables	Non-perish	0.2	0.2	0.4	0.0	0.3	0.3	3.4	0.4	0.4	1.8
Fats	Perishable	1.5	0.1	0.0	5.3	0.2	0.0	8.3	0.0	0.1	0.0
Fats	Non-perish	1.4	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Fats	Country	0.1	0.0	0.0	0.3	0.0	0.0	1.4	0.0	0.0	0.0
Sweets	Non-perish	5.6	0.0	12.2	0.0	6.6	0.2	0.0	22.2	0.1	0.1
Misc	Perishable	4.5	3.8	3.3	7.0	4.2	2.7	13.7	2.7	4.0	4.6
Misc	Non-perish	1.9	1.4	3.0	1.2	6.2	3.2	9.2	1.0	1.6	24.9
LNV	All groups	20.9	3.1	30.3	17.4	14.1	4.6	5.2	10.5	4.6	5.3
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8c. Nutrients from food groups, Davis Inlet: means

Food Group	Perish/non	Calories	Protein	Carbohydrates		Fat	Calcium		Iron		Vitamin A		Vitamin C	Thiamin	Folacin
				g	g		g	mg	mg	mg	RE	mg			
Dairy	Perish	51.0	2.9	2.4	3.3	92.3	0.1	41.4	0.3			0.0			2.4
Dairy	Non-perish	38.2	2.0	2.9	2.1	75.1	0.1	16.0	4.4			0.0			2.2
Eggs	Perish	95.4	8.0	0.8	6.4	31.3	0.9	120.4	0.0			0.0			23.0
Meat	Perish	516.1	48.2	1.2	34.1	25.8	3.0	31.8	0.3			0.3			13.8
Meat	Non-perish	5.5	0.2	0.0	0.5	0.2	0.0	0.0	0.0			0.0			0.1
Meat	Country	480.9	78.5	0.1	16.1	64.6	13.6	7.5	2.2			0.7			11.4
Alternates	Perish	68.1	2.5	0.7	6.1	2.7	0.3	0.0	0.0			0.0			1.6
Alternates	Non-perish	105.4	7.4	1.3	7.7	6.2	0.6	0.9	0.3			0.1			4.5
Breads	Perish	232.5	7.8	43.0	3.0	56.3	2.2	1.1	0.0			0.3			28.3
Breads	Non-perish	516.7	14.5	102.2	4.4	44.3	5.2	0.2	0.0			0.5			23.6
Citrus	Perish	11.2	0.2	2.6	0.1	4.6	0.0	4.1	9.9			0.0			5.5
Citrus	Non-perish	20.6	0.4	4.5	0.2	7.7	0.3	18.0	13.7			0.0			7.2
Fruit	Perish	6.6	0.1	1.7	0.0	0.6	0.0	0.6	0.6			0.0			0.9
Fruit	Non-perish	12.6	0.1	3.3	0.0	2.3	0.1	4.8	1.5			0.0			0.9
Potatoes	Perish	81.4	1.5	17.3	0.9	6.5	0.3	0.0	6.6			0.1			7.9
Vegetables	Perish	19.5	0.6	4.6	0.1	15.2	0.2	488.6	5.8			0.0			8.7
Vegetables	Non-perish	3.7	0.2	0.8	0.0	1.6	0.1	18.3	0.9			0.0			2.8
Fats	Perish	295.9	0.4	0.4	33.1	12.2	0.0	435.7	0.0			0.0			0.5
Fats	Non-perish	211.5	0.0	0.0	23.5	0.0	0.0	0.0	0.0			0.0			0.0
Sweets	Non-perish	240.3	0.1	61.6	0.1	20.4	0.2	0.7	13.6			0.0			0.9
Misc	Perish	61.7	5.2	5.1	2.2	10.6	0.6	100.2	2.8			0.0			6.2
Misc	Non-perish	27.5	0.5	6.4	0.3	113.9	0.6	18.8	0.7			0.0			54.5
LNV	all groups	313.4	4.1	46.6	12.7	44.7	0.9	8.5	12.7			0.1			9.0
Total		3415.9	185.4	309.5	157.0	639.2	29.3	1317.6	76.4			2.3			215.9

Percentages

Food Group	Perish/non Perish	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perish	1.5	1.6	0.8	2.1	14.4	0.2	3.1	0.4	0.7	1.1
Dairy	Non-perish	1.1	1.1	0.9	1.3	11.8	0.2	1.2	5.8	0.6	1.0
Eggs	Perish	2.8	4.3	0.2	4.1	4.9	3.1	9.1	0.0	1.5	10.7
Meat	Perish	15.1	26.0	0.4	21.7	4.0	10.1	2.4	0.3	14.6	6.4
Meat	Non-perish	0.2	0.1	0.0	0.3	0.0	0.1	0.0	0.0	0.1	0.0
Meat	Country	14.1	42.3	0.0	10.3	10.1	46.5	0.6	2.9	29.2	5.3
Alternates	Perish	2.0	1.4	0.2	3.9	0.4	1.1	0.0	0.0	1.5	0.7
Alternates	Non-perish	3.1	4.0	0.4	4.9	1.0	2.1	0.1	0.4	2.6	2.1
Bread & Cereals	Perish	6.8	4.2	13.9	1.9	8.8	7.5	0.1	0.0	11.3	13.1
Bread & Cereals	Non-perish	15.1	7.8	33.0	2.8	6.9	17.9	0.0	0.1	23.4	10.9
Citrus	Perish	0.3	0.1	0.9	0.0	0.7	0.2	0.3	13.0	1.1	2.6
Citrus	Non-perish	0.6	0.2	1.5	0.1	1.2	0.9	1.4	17.9	1.1	3.3
Fruit	Perish	0.2	0.0	0.5	0.0	0.1	0.1	0.0	0.8	0.1	0.4
Fruit	Non-perish	0.4	0.1	1.1	0.0	0.4	0.2	0.4	2.0	0.5	0.4
Potatoes	Perish	2.4	0.8	5.6	0.6	1.0	1.2	0.0	8.7	3.5	3.7
Vegetables	Perish	0.6	0.3	1.5	0.1	2.4	0.7	37.1	7.6	1.1	4.0
Vegetables	Non-perish	0.1	0.1	0.3	0.0	0.2	0.3	1.4	1.1	0.3	1.3
Fats	Perish	8.7	0.2	0.1	21.1	1.9	0.1	33.1	0.0	0.2	0.2
Fats	Non-perish	6.2	0.0	0.0	14.9	0.0	0.0	0.0	0.0	0.0	0.0
Sweets	Non-perish	7.0	0.1	19.9	0.1	3.2	0.6	0.1	17.8	0.1	0.4
Misc	Perish	1.8	2.8	1.6	1.4	1.7	2.0	7.6	3.6	1.8	2.9
Misc	Non-perish	0.8	0.3	2.1	0.2	17.8	1.9	1.4	1.0	0.6	25.2
LNV	All groups	9.2	2.2	15.1	8.1	7.0	3.2	0.6	16.6	4.1	4.2
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8d. Nutrients from food groups, Fort Severn: means

Food Group	Perish/non	Calories	Protein	g	Carbohydrates	Fat	g	Calcium	Iron	mg	Vitamin A	mg	Vitamin C	mg	Thiamin	mg	Folacin	mg
Dairy	Perish	142.0	7.8	12.3	7.0	281.4	0.1	99.4	2.2	0.1	11.5							
Dairy	Non-perish	113.1	5.7	8.5	6.4	219.7	0.2	46.2	13.8	0.0	6.6							
Eggs	Perish	37.3	3.1	0.3	2.5	12.2	0.3	46.0	0.0	0.0	9.3							
Meat	Perish	736.9	45.5	1.1	59.7	31.4	4.9	37.1	4.3	0.2	8.6							
Meat	Non-perish	2.1	0.3	0.0	0.1	3.3	0.0	0.3	0.0	0.0	0.2							
Meat	Country	55.1	9.8	0.0	1.5	7.3	2.0	0.0	0.0	0.1	1.4							
Alternates	Perish	29.2	1.2	0.6	2.5	1.1	0.1	0.0	0.0	0.0	1.9							
Alternates	Non-perish	19.0	1.6	0.0	1.3	0.7	0.1	0.0	0.0	0.0	0.6							
Breads	Perish	140.2	4.7	25.9	1.9	37.0	1.3	1.9	0.0	0.1	17.3							
Breads	Non-perish	302.8	7.7	56.7	4.4	43.7	2.8	3.6	0.1	0.3	10.3							
Citrus	Perish	18.9	0.3	4.5	0.0	3.8	0.1	6.1	16.4	0.0	18.1							
Citrus	Non-perish	13.4	0.1	3.1	0.1	3.2	0.1	5.6	10.9	0.0	3.0							
Fruit	Perish	31.5	0.3	8.0	0.2	2.8	0.1	4.7	3.2	0.0	4.3							
Potatoes	Perish	64.0	1.3	13.7	0.6	5.2	0.4	0.0	6.2	0.1	6.6							
Potatoes	Non-perish	17.1	0.5	2.2	0.8	12.0	0.0	7.8	2.4	0.0	1.2							
Vegetables	Perish	4.3	0.2	1.0	0.0	2.9	0.1	178.5	0.8	0.0	3.2							
Vegetables	Non-perish	10.2	0.5	2.1	0.1	2.6	0.1	37.1	1.1	0.0	5.9							
Fats	Perish	35.0	0.0	0.0	3.9	1.2	0.0	44.1	0.0	0.0	0.1							
Fats	Non-perish	38.5	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0							
Sweets	Non-perish	145.9	0.0	37.5	0.0	14.1	0.1	1.6	10.6	0.0	0.2							
Misc	Perish	52.7	2.4	4.2	2.9	12.3	0.3	42.1	2.0	0.0	4.0							
Misc	Non-perish	54.1	2.1	9.3	1.2	34.2	0.7	35.4	0.8	0.0	55.5							
LNV	all groups	233.2	1.7	41.4	7.0	41.7	0.6	13.3	5.9	0.0	2.9							
Total		2296.6	96.9	232.5	108.4	773.9	14.5	610.8	80.7	1.1	172.4							

Percentages

Food Group	Perish/non Perish	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perish	6.2	8.0	5.3	6.4	36.4	0.8	16.3	2.8	7.7	6.7
Dairy	Non-perish	4.9	5.9	3.6	5.9	28.4	1.1	7.6	17.1	3.5	3.9
Eggs	Perish	1.6	3.2	0.1	2.3	1.6	2.4	7.5	0.0	1.2	5.4
Meat	Perish	32.1	47.0	0.5	55.0	4.1	34.0	6.1	5.3	15.3	5.0
Meat	Non-perish	0.1	0.3	0.0	0.1	0.4	0.1	0.0	0.0	0.0	0.1
Meat	Country	2.4	10.1	0.0	1.3	0.9	13.5	0.0	0.0	8.1	0.8
Alternates	Perish	1.3	1.2	0.2	2.3	0.1	0.6	0.0	0.0	1.2	1.1
Alternates	Non-perish	0.8	1.7	0.0	1.2	0.1	0.8	0.0	0.0	0.7	0.3
Bread & Cereals	Perish	6.1	4.9	11.1	1.7	4.8	9.3	0.3	0.0	13.0	10.0
Bread & Cereals	Non-perish	13.2	8.0	24.4	4.1	5.6	19.2	0.6	0.1	25.9	6.0
Citrus	Perish	0.8	0.3	1.9	0.0	0.5	0.4	1.0	20.3	3.0	10.5
Citrus	Non-perish	0.6	0.1	1.3	0.1	0.4	0.9	0.9	13.5	1.1	1.7
Fruit	Perish	1.4	0.3	3.5	0.2	0.4	0.7	0.8	3.9	1.2	2.5
Potatoes	Perish	2.8	1.3	5.9	0.6	0.7	2.5	0.0	7.7	5.5	3.8
Potatoes	Non-perish	0.7	0.5	0.9	0.7	1.6	0.2	1.3	3.0	2.1	0.7
Vegetables	Perish	0.2	0.2	0.4	0.0	0.4	0.5	29.2	1.0	1.0	1.9
Vegetables	Non-perish	0.4	0.5	0.9	0.1	0.3	0.9	6.1	1.3	1.0	3.4
Fats	Perish	1.5	0.0	0.0	3.6	0.2	0.0	7.2	0.0	0.0	0.1
Fats	Non-perish	1.7	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0
Sweets	Non-perish	6.4	0.0	16.1	0.0	1.8	0.6	0.3	13.2	0.1	0.1
Misc	Perish	2.3	2.5	1.8	2.7	1.6	2.0	6.9	2.5	2.1	2.3
Misc	Non-perish	2.4	2.1	4.0	1.1	4.4	5.1	5.8	1.0	3.0	32.2
LNV	All groups	10.2	1.8	17.8	6.5	5.4	4.3	2.2	7.3	3.3	1.7
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8e: Nutrients from food groups, Pond Inlet 1992: means

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
			g	g	g	g	mg	RE	mg	mg	mcg
Dairy	Perishable	56.6	2.7	4.8	3.0	85.2		39.1	0.4	0.0	2.6
Dairy	Non-perish	21.2	1.1	1.6	1.2	40.4		8.4	2.5	0.0	1.2
Eggs	Perishable	20.4	1.7	0.2	1.4	6.7		25.5	0.0	0.0	5.0
Meat	Perishable	248.4	25.0	1.0	15.3	15.5		15.3	0.1	0.2	5.9
Meat	Country	541.4	80.1	0.2	27.3	43.7		259.9	1.0	0.6	11.4
Alternates	Perishable	5.5	0.2	0.1	0.5	1.1		0.0	0.0	0.0	0.5
Alternates	Non-perish	5.4	0.4	0.2	0.3	0.8		0.1	0.0	0.0	0.4
Breads	Perishable	71.9	2.3	13.5	0.9	18.2		0.1	0.0	0.1	8.9
Breads	Non-perish	270.7	7.6	51.1	3.6	31.9		0.5	0.1	0.3	10.4
Citrus	Perishable	17.4	0.3	4.2	0.0	6.1		6.2	16.1	0.0	14.8
Citrus	Non-perish	15.8	0.3	2.9	0.5	4.4		16.6	3.6	0.0	2.9
Fruit	Perishable	17.0	0.1	4.3	0.1	1.9		1.9	1.8	0.0	1.8
Fruit	Non-perish	3.8	0.0	1.0	0.0	0.6		0.6	0.3	0.0	0.2
Potatoes	Perishable	38.1	0.7	6.8	1.0	2.2		0.0	2.7	0.0	3.3
Potatoes	Non-perish	4.1	0.1	0.7	0.1	1.6		1.0	0.7	0.0	0.4
Vegetables	Perishable	12.9	0.5	2.9	0.0	7.0		153.3	2.0	0.0	5.2
Vegetables	Non-perish	7.2	0.2	1.7	0.0	1.6		37.2	0.5	0.0	4.0
Fats	Perishable	18.9	0.0	0.0	2.1	0.6		22.5	0.0	0.0	0.1
Fats	Non-perish	83.4	0.0	0.0	9.3	0.0		0.0	0.0	0.0	0.0
Sweets	Non-perish	174.6	0.1	44.1	0.2	50.3		1.2	37.5	0.0	0.1
Misc	Perishable	86.5	4.8	8.2	3.8	47.5		68.2	3.9	0.1	18.5
Misc	Non-perish	60.6	2.3	9.5	1.7	66.6		23.5	2.2	0.0	23.3
LNV	all groups	365.6	3.2	62.1	12.0	54.1		11.4	7.3	0.1	10.5
Total		2147.4	133.6	221.1	84.6	488.2		692.6	82.5	1.5	131.2

Percentages, Pond Inlet, 1992.

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perishable	2.6	2.0	2.2	3.6	17.5	0.2	5.7	0.4	1.2	2.0
Dairy	Non-perish	1.0	0.8	0.7	1.4	8.3	0.1	1.2	3.0	0.5	0.9
Eggs	Perishable	1.0	1.3	0.1	1.6	1.4	0.7	3.7	0.0	0.5	3.8
Meat	Perishable	11.6	18.7	0.4	18.1	3.2	5.2	2.2	0.1	13.9	4.5
Meat	Country	25.2	60.0	0.1	32.3	9.0	70.2	37.5	1.2	40.7	8.7
Alternates	Perishable	0.3	0.1	0.1	0.6	0.2	0.1	0.0	0.0	0.3	0.4
Alternates	Non-perish	0.3	0.3	0.1	0.4	0.2	0.2	0.0	0.0	0.2	0.3
Bread & Cereals	Perishable	3.3	1.7	6.1	1.1	3.7	2.3	0.0	0.0	4.8	6.8
Bread & Cereals	Non-perish	12.6	5.7	23.1	4.2	6.5	9.2	0.1	0.1	20.3	8.0
Citrus	Perishable	0.8	0.2	1.9	0.0	1.3	0.2	0.9	19.5	2.1	11.3
Citrus	Non-perish	0.7	0.2	1.3	0.5	0.9	0.5	2.4	4.3	0.8	2.2
Fruit	Perishable	0.8	0.1	2.0	0.1	0.4	0.2	0.3	2.2	0.6	1.4
Fruit	Non-perish	0.2	0.0	0.4	0.0	0.1	0.1	0.1	0.3	0.2	0.1
Potatoes	Perishable	1.8	0.5	3.1	1.2	0.4	0.9	0.0	3.3	1.8	2.5
Potatoes	Non-perish	0.2	0.1	0.3	0.1	0.3	0.0	0.1	0.9	0.6	0.3
Vegetables	Perishable	0.6	0.4	1.3	0.1	1.4	0.6	22.1	2.4	1.1	4.0
Vegetables	Non-perish	0.3	0.2	0.8	0.1	0.3	0.3	5.4	0.6	0.3	3.0
Fats	Perishable	0.9	0.0	0.0	2.5	0.1	0.0	3.3	0.0	0.0	0.0
Fats	Non-perish	3.9	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0
Sweets	Non-perish	8.1	0.1	19.9	0.3	10.3	0.5	0.2	45.4	0.4	0.1
Misc	Perishable	4.0	3.6	3.7	4.5	9.7	2.5	9.8	4.7	4.2	14.1
Misc	Non-perish	2.8	1.7	4.3	2.0	13.6	2.9	3.4	2.7	2.2	17.7
LNV	All groups	17.0	2.4	28.1	14.3	11.1	3.3	1.6	8.9	3.5	8.0
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8f. Nutrients from food groups, Pond Inlet 1993: means

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
			g	g	g	mg	mg	RE	mg	mg	mcg
Dairy	Perishable	41.40	2.41	2.89	2.28	76.82	0.04	30.79	0.35	0.02	2.41
Dairy	Non-perish	13.55	0.68	1.00	0.77	25.93	0.02	5.36	1.55	0.00	0.76
Eggs	Perishable	11.38	0.95	0.09	0.77	3.73	0.11	14.34	0.00	0.00	2.75
Meat	Perishable	121.31	11.76	0.89	7.52	7.28	0.72	7.51	0.05	0.06	2.99
Meat	Non-perish	11.92	0.74	0.21	0.88	4.46	0.16	1.99	0.08	0.01	0.43
Meat	Country	416.65	66.94	0.04	16.66	35.18	19.84	220.35	2.37	0.56	9.26
Alternates	Perishable	7.54	0.31	0.11	0.67	0.41	0.03	0.01	0.00	0.00	0.41
Alternates	Non-perish	15.25	0.98	0.45	1.06	1.55	0.13	0.25	0.02	0.01	0.80
Bread & Cereals	Perishable	40.52	1.26	7.62	0.50	9.74	0.35	0.13	0.04	0.04	4.71
Bread & Cereals	Non-perish	364.25	9.81	75.39	1.51	22.53	3.57	1.02	0.08	0.35	17.09
Citrus	Perishable	7.54	0.08	1.85	0.02	2.32	0.03	1.90	6.46	0.01	2.66
Citrus	Non-perish	11.72	0.17	2.43	0.19	2.50	0.11	7.94	7.76	0.01	3.77
Fruit	Perishable	15.36	0.11	3.94	0.09	1.45	0.05	1.32	1.52	0.01	1.87
Fruit	Non-perish	1.18	0.01	0.31	0.00	0.12	0.01	0.01	0.02	0.00	0.01
Potatoes	Perishable	16.48	0.28	2.82	0.50	0.86	0.10	0.00	1.11	0.01	1.40
Potatoes	Non-perish	2.26	0.05	0.33	0.09	0.76	0.00	0.91	0.32	0.00	0.17
Vegetables	Perishable	6.83	0.28	1.39	0.11	3.57	0.08	63.21	2.39	0.01	5.14
Vegetables	Non-perish	6.19	0.26	1.40	0.04	1.28	0.07	24.50	0.51	0.01	3.59
Fats	Perishable	16.70	0.02	0.00	1.88	0.57	0.00	19.88	0.00	0.00	0.05
Fats	Non-perish	129.14	0.00	0.00	14.40	0.00	0.00	0.16	0.00	0.00	0.00
Fats	Country	9.93	0.06	0.00	1.08	0.04	0.02	12.55	0.00	0.00	0.00
Sweets	Perishable	4.83	0.01	1.19	0.02	1.70	0.02	0.06	1.51	0.01	0.00
Sweets	Non-perish	187.61	0.40	46.58	0.67	25.14	0.22	3.04	16.52	0.09	0.27
Misc	Perishable	98.75	5.01	10.01	4.27	54.47	0.73	24.52	3.17	0.08	22.45
Misc	Non-perish	130.39	4.79	20.45	3.46	118.81	1.50	56.53	2.21	0.11	41.91
LNV	All groups	467.84	4.84	79.52	15.09	72.75	1.38	21.23	10.56	0.08	16.38

Percentages, Pond Inlet 1993

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perishable	1.9	2.1	1.1	3.1	16.2	0.1	5.9	0.6	1.1	1.7
Dairy	Non-perish	0.6	0.6	0.4	1.0	5.5	0.1	1.0	2.6	0.3	0.5
Eggs	Perishable	0.5	0.8	0.0	1.0	0.8	0.4	2.8	0.0	0.3	1.9
Meat	Perishable	5.6	10.5	0.3	10.1	1.5	2.5	1.4	0.1	3.8	2.1
Meat	Non-perish	0.6	0.7	0.1	1.2	0.9	0.6	0.4	0.1	0.4	0.3
Meat	Country	19.3	59.7	0.0	22.4	7.4	67.7	42.4	4.0	37.9	6.6
Alternates	Perishable	0.3	0.3	0.0	0.9	0.1	0.1	0.0	0.0	0.1	0.3
Alternates	Non-perish	0.7	0.9	0.2	1.4	0.3	0.4	0.0	0.0	0.7	0.6
Bread & Cereals	Perishable	1.9	1.1	2.9	0.7	2.1	1.2	0.0	0.1	2.6	3.3
Bread & Cereals	Non-perish	16.9	8.7	28.9	2.0	4.8	12.2	0.2	0.1	23.7	12.1
Citrus	Perishable	0.3	0.1	0.7	0.0	0.5	0.1	0.4	11.0	0.5	1.9
Citrus	Non-perish	0.5	0.2	0.9	0.3	0.5	0.4	1.5	13.2	0.9	2.7
Fruit	Perishable	0.7	0.1	1.5	0.1	0.3	0.2	0.3	2.6	0.4	1.3
Fruit	Non-perish	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Potatoes	Perishable	0.8	0.3	1.1	0.7	0.2	0.3	0.0	1.9	0.7	1.0
Potatoes	Non-perish	0.1	0.0	0.1	0.1	0.2	0.0	0.2	0.5	0.3	0.1
Vegetables	Perishable	0.3	0.3	0.5	0.1	0.8	0.3	12.2	4.1	0.8	3.6
Vegetables	Non-perish	0.3	0.2	0.5	0.1	0.3	0.2	4.7	0.9	0.4	2.5
Fats	Perishable	0.8	0.0	0.0	2.5	0.1	0.0	3.8	0.0	0.0	0.0
Fats	Non-perish	6.0	0.0	0.0	19.3	0.0	0.0	0.0	0.0	0.0	0.0
Fats	Country	0.5	0.1	0.0	1.4	0.0	0.1	2.4	0.0	0.0	0.0
Sweets	Perishable	0.2	0.0	0.5	0.0	0.4	0.1	0.0	2.6	0.3	0.0
Sweets	Non-perish	8.7	0.4	17.9	0.9	5.3	0.7	0.6	28.2	6.1	0.2
Misc	Perishable	4.6	4.5	3.8	5.7	11.5	2.5	4.7	5.4	5.6	15.9
Misc	Non-perish	6.0	4.3	7.8	4.6	25.1	5.1	10.9	3.8	7.7	29.7
LNV	All groups	21.7	4.3	30.5	20.2	15.3	4.7	4.1	18.0	5.4	11.6
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8g. Nutrients from food groups, Arctic Bay: means

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
			g	g	g	mg	mg	RE	mg	mg	mcg
Dairy	Perishable	49.41	3.17	2.22	3.10	97.02	0.04	42.26	0.31	0.01	2.31
Dairy	Non-perish	19.84	0.99	1.46	1.13	37.97	0.03	7.85	2.40	0.01	1.15
Eggs	Perishable	24.28	2.02	0.19	1.64	7.95	0.22	30.08	0.00	0.01	5.99
Meat	Perishable	329.90	29.17	2.66	21.70	18.98	1.84	18.00	0.19	0.24	8.22
Meat	Non-perish	5.39	0.74	0.00	0.25	8.82	0.07	1.41	0.03	0.00	0.57
Meat	Country	386.00	54.61	0.02	20.33	28.40	12.95	190.34	1.59	0.45	11.99
Alternates	Perishable	12.92	0.57	0.16	1.12	0.38	0.04	0.00	0.00	0.01	0.43
Alternates	Non-perish	1.89	0.07	0.01	0.17	0.03	0.00	0.00	0.01	0.00	0.03
Bread & Cereals	Perishable	50.96	1.52	9.29	0.78	11.89	0.45	0.00	0.00	0.05	6.17
Bread & Cereals	Non-perish	260.80	6.53	52.20	2.58	28.28	2.39	8.33	0.22	0.21	12.52
Citrus	Perishable	28.36	0.44	6.90	0.07	11.35	0.09	9.24	26.33	0.04	20.11
Citrus	Non-perish	14.69	0.24	2.33	0.56	3.66	0.10	15.30	3.26	0.01	3.39
Fruit	Perishable	8.69	0.06	2.23	0.05	0.84	0.03	0.75	1.07	0.00	1.27
Fruit	Non-perish	2.74	0.02	0.71	0.00	0.40	0.01	1.70	0.14	0.00	0.16
Potatoes	Perishable	32.09	0.51	5.05	1.19	1.40	0.19	0.00	1.70	0.02	2.44
Potatoes	Non-perish	11.69	0.28	1.77	0.41	5.32	0.03	2.87	1.42	0.01	0.87
Vegetables	Perishable	14.04	0.53	2.89	0.19	5.95	0.16	205.47	4.42	0.02	5.86
Vegetables	Non-perish	9.02	0.39	2.02	0.06	1.52	0.09	11.62	0.79	0.01	5.59
Fats	Perishable	10.64	0.01	0.00	1.20	0.37	0.00	13.27	0.00	0.00	0.03
Fats	Non-perish	72.57	0.00	0.00	8.08	0.00	0.00	0.00	0.00	0.00	0.00
Sweets	Perishable	3.69	0.01	0.97	0.00	0.28	0.01	0.12	0.36	0.00	0.20
Sweets	Non-perish	108.46	0.13	27.75	0.02	17.15	0.06	0.02	11.01	0.00	0.00
Misc	Perishable	148.81	7.64	15.88	6.10	85.11	1.30	35.86	3.79	0.13	63.01
Misc	Non-perish	147.82	6.04	21.77	4.12	75.55	1.49	39.37	1.45	0.13	34.79
LNV	All groups	421.78	3.42	79.40	10.84	71.51	1.07	20.83	6.59	0.07	10.88

Percentages

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perishable	2.3	2.7	0.9	3.6	18.7	0.2	6.5	0.5	1.0	1.2
Dairy	Non-perish	0.9	0.8	0.6	1.3	7.3	0.1	1.2	3.6	0.5	0.6
Eggs	Perishable	1.1	1.7	0.1	1.9	1.5	1.0	4.6	0.0	0.6	3.0
Meat	Perishable	15.2	24.5	1.1	25.3	3.6	8.1	2.7	0.3	16.6	4.2
Meat	Non-perish	0.2	0.6	0.0	0.3	1.7	0.3	0.2	0.0	0.2	0.3
Meat	Country	17.7	45.8	0.0	23.7	5.5	57.1	29.1	2.4	31.0	6.1
Alternates	Perishable	0.6	0.5	0.1	1.3	0.1	0.2	0.0	0.0	0.5	0.2
Alternates	Non-perish	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
Bread & Cereals	Perishable	2.3	1.3	3.9	0.9	2.3	2.0	0.0	0.0	3.6	3.1
Bread & Cereals	Non-perish	12.0	5.5	21.9	3.0	5.4	10.5	1.3	0.3	14.6	6.3
Citrus	Perishable	1.3	0.4	2.9	0.1	2.2	0.4	1.4	39.2	3.1	10.2
Citrus	Non-perish	0.7	0.2	1.0	0.7	0.7	0.4	2.3	4.9	0.7	1.7
Fruit	Perishable	0.4	0.1	0.9	0.1	0.2	0.1	0.1	1.6	0.3	0.6
Fruit	Non-perish	0.1	0.0	0.3	0.0	0.1	0.1	0.3	0.2	0.0	0.1
Potatoes	Perishable	1.5	0.4	2.1	1.4	0.3	0.8	0.0	2.5	1.3	1.2
Potatoes	Non-perish	0.5	0.2	0.7	0.5	1.0	0.2	0.4	2.1	1.0	0.4
Vegetables	Perishable	0.6	0.4	1.2	0.2	1.1	0.7	31.4	6.6	1.3	3.0
Vegetables	Non-perish	0.4	0.3	0.8	0.1	0.3	0.4	1.8	1.2	0.7	2.8
Fats	Perishable	0.5	0.0	0.0	1.4	0.1	0.0	2.0	0.0	0.0	0.0
Fats	Non-perish	3.3	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0
Sweets	Perishable	0.2	0.0	0.4	0.0	0.1	0.1	0.0	0.5	0.0	0.1
Sweets	Non-perish	5.0	0.1	11.7	0.0	3.3	0.3	0.0	16.4	0.1	0.0
Misc	Perishable	6.8	6.4	6.7	7.1	16.4	5.7	5.5	5.7	9.3	31.8
Misc	Non-perish	6.8	5.1	9.2	4.8	14.5	6.6	6.0	2.2	9.0	17.6
LNV	All groups	19.4	2.9	33.4	12.7	13.7	4.7	3.2	9.8	4.6	5.5
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8h. Nutrients from food groups, Coral Harbour: means

Food Group	Perish/non	Calories	Protein	Carbohydrate	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
				g	g	mg	mg	RE	mg	mg	mcg
Dairy	Perishable	85.22		4.28	5.83	137.02	0.10	61.26	0.72	0.03	4.75
Dairy	Non-perish	20.00		1.00	1.47	38.37	0.03	7.91	2.40	0.01	1.15
Eggs	Perishable	9.76		0.82	0.08	3.19	0.09	12.08	0.00	0.00	2.40
Meat	Perishable	283.31		24.05	1.48	12.30	1.34	10.70	0.20	0.30	5.33
Meat	Non-perish	0.83		0.19	0.00	0.08	0.02	0.15	0.00	0.00	0.03
Meat	Country	389.36		57.35	0.02	25.72	11.51	113.21	2.52	0.50	11.85
Alternates	Perishable	15.12		0.70	0.36	1.99	0.16	0.07	0.02	0.04	3.39
Alternates	Non-perish	35.15		1.57	1.81	3.11	0.29	0.49	0.09	0.02	2.09
Bread & Cereals	Perishable	94.94		2.94	17.43	23.10	0.85	0.17	0.01	0.10	11.73
Bread & Cereals	Non-perish	200.92		5.22	40.55	13.04	2.04	0.89	0.00	0.22	10.34
Citrus	Perishable	14.32		0.15	3.53	4.80	0.07	1.74	5.86	0.02	4.19
Citrus	Non-perish	24.56		0.18	5.75	4.85	0.20	10.73	14.05	0.02	1.33
Fruit	Perishable	20.25		0.18	5.17	1.91	0.07	1.71	2.06	0.01	3.02
Fruit	Non-perish	5.36		0.04	1.43	0.48	0.03	1.98	0.52	0.00	0.25
Potatoes	Perishable	25.77		0.44	4.52	1.69	0.14	0.00	1.89	0.02	2.08
Potatoes	Non-perish	12.79		0.33	2.24	5.69	0.04	2.42	2.37	0.03	1.14
Vegetables	Perishable	12.18		0.52	2.72	8.14	0.17	125.04	3.61	0.02	8.12
Vegetables	Non-perish	19.96		0.84	4.49	3.19	0.19	19.60	1.76	0.02	12.27
Fats	Perishable	20.88		0.02	0.00	0.69	0.00	22.31	0.00	0.00	0.08
Fats	Non-perish	62.96		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fats	Country	23.64		0.98	0.00	0.35	0.06	29.24	0.00	0.01	0.00
Sweets	Perishable	1.75		0.00	0.46	0.13	0.01	0.09	0.17	0.00	0.10
Sweets	Non-perish	171.56		0.41	42.63	34.41	0.14	0.63	26.75	0.05	0.58
Misc	Perishable	97.00		3.87	8.23	42.29	0.55	25.76	2.00	0.05	10.95
Misc	Non-perish	107.72		5.11	14.78	80.63	1.42	46.99	2.41	0.07	12.63
LNV	All groups	542.15		4.04	102.00	94.24	1.24	16.44	7.22	0.07	10.07

Percentages

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perishable	3.7	3.7	2.2	5.7	25.3	0.5	12.0	0.9	1.7	4.0
Dairy	Non-perish	0.9	0.9	0.6	1.3	7.1	0.1	1.5	3.1	0.4	1.0
Eggs	Perishable	0.4	0.7	0.0	0.7	0.6	0.4	2.4	0.0	0.2	2.0
Meat	Perishable	12.3	20.9	0.6	22.2	2.3	6.4	2.1	0.3	18.9	4.4
Meat	Non-perish	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Meat	Country	16.9	49.8	0.0	20.2	4.8	55.4	22.1	3.3	31.3	9.9
Alternates	Perishable	0.7	0.6	0.1	1.5	0.4	0.8	0.0	0.0	2.3	2.8
Alternates	Non-perish	1.5	1.4	0.7	2.7	0.6	1.4	0.1	0.1	1.0	1.7
Bread & Cereals	Perishable	4.1	2.5	6.5	1.6	4.3	4.1	0.0	0.0	6.1	9.8
Bread & Cereals	Non-perish	8.7	4.5	15.2	1.9	2.4	9.8	0.2	0.0	14.0	8.6
Citrus	Perishable	0.6	0.1	1.3	0.0	0.9	0.4	0.3	7.6	1.3	3.5
Citrus	Non-perish	1.1	0.2	2.2	0.2	0.9	1.0	2.1	18.3	1.0	1.1
Fruit	Perishable	0.9	0.2	1.9	0.1	0.4	0.3	0.3	2.7	0.7	2.5
Fruit	Non-perish	0.2	0.0	0.5	0.0	0.1	0.2	0.4	0.7	0.1	0.2
Potatoes	Perishable	1.1	0.4	1.7	0.8	0.3	0.7	0.0	2.5	1.2	1.7
Potatoes	Non-perish	0.6	0.3	0.8	0.3	1.1	0.2	0.5	3.1	1.7	1.0
Vegetables	Perishable	0.5	0.5	1.0	0.1	1.5	0.8	24.4	4.7	1.1	6.8
Vegetables	Non-perish	0.9	0.7	1.7	0.1	0.6	0.9	3.8	2.3	1.3	10.2
Fats	Perishable	0.9	0.0	0.0	2.7	0.1	0.0	4.4	0.0	0.0	0.1
Fats	Non-perish	2.7	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0
Fats	Country	1.0	0.9	0.0	3.2	0.1	0.3	5.7	0.0	0.6	0.0
Sweets	Perishable	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.1
Sweets	Non-perish	7.5	0.4	16.0	0.5	6.4	0.7	0.1	34.9	2.9	0.5
Misc	Perishable	4.2	3.4	3.1	6.1	7.8	2.7	5.0	2.6	3.4	9.1
Misc	Non-perish	4.7	4.4	5.5	3.6	14.9	6.8	9.2	3.1	4.5	10.5
LNV	All groups	23.6	3.5	38.2	16.3	17.4	6.0	3.2	9.4	4.2	8.4
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8i. Nutrients from food groups, Gjoa Haven: means

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
			g	g	g	mg	mg	RE	mg	mg	mcg
Dairy	Perishable	74.41	3.72	4.57	4.66	114.97	0.09	62.46	0.35	0.02	3.15
Dairy	Non-perish	40.39	2.02	2.97	2.31	77.52	0.06	15.97	4.78	0.01	2.29
Eggs	Perishable	22.43	1.86	0.18	1.52	7.33	0.20	27.36	0.00	0.01	5.74
Meat	Perishable	184.62	15.70	1.99	12.19	9.40	0.97	11.19	0.17	0.11	3.89
Meat	Non-perish	0.48	0.05	0.03	0.02	0.31	0.05	0.63	0.03	0.00	0.07
Meat	Country	421.35	56.30	0.02	23.37	40.70	7.12	174.57	1.58	0.62	14.22
Alternates	Perishable	19.63	0.80	0.18	1.74	0.59	0.06	0.02	0.00	0.01	0.41
Alternates	Non-perish	25.77	1.02	0.98	2.00	2.55	0.09	0.73	0.17	0.03	1.65
Bread & Cereals	Perishable	87.45	2.77	16.18	1.18	21.78	0.79	1.82	0.02	0.09	11.00
Bread & Cereals	Non-perish	381.46	9.69	82.25	1.02	24.65	2.95	0.21	0.00	0.34	14.34
Citrus	Perishable	5.61	0.05	1.38	0.02	1.36	0.02	1.71	3.31	0.00	1.03
Citrus	Non-perish	12.79	0.08	2.82	0.17	2.36	0.10	4.76	8.37	0.01	0.75
Fruit	Perishable	15.07	0.09	3.87	0.09	1.78	0.05	1.12	1.37	0.01	1.66
Fruit	Non-perish	3.35	0.04	0.88	0.01	0.52	0.02	0.12	0.03	0.00	0.02
Potatoes	Perishable	25.64	0.45	4.84	0.56	1.55	0.13	0.00	1.84	0.02	2.24
Potatoes	Non-perish	11.70	0.29	1.84	0.38	5.26	0.03	4.06	1.96	0.02	0.94
Vegetables	Perishable	10.50	0.54	2.33	0.06	6.40	0.16	112.77	5.59	0.02	7.04
Vegetables	Non-perish	4.63	0.15	1.11	0.03	0.72	0.04	23.89	0.46	0.00	2.80
Fats	Perishable	35.28	0.04	0.02	3.97	1.28	0.00	49.57	0.00	0.00	0.07
Fats	Non-perish	110.31	0.00	0.00	12.25	0.00	0.00	0.00	0.00	0.00	0.00
Fats	Country	11.48	0.70	0.00	1.40	0.23	0.03	18.81	0.00	0.01	0.00
Sweets	Perishable	10.99	0.01	2.75	0.03	5.68	0.02	0.03	4.92	0.02	0.03
Sweets	Non-perish	224.90	0.11	55.69	0.48	132.45	0.14	0.07	99.22	0.01	0.23
Misc	Perishable	136.31	6.62	13.86	6.00	72.07	1.07	29.04	3.05	0.13	45.21
Misc	Non-perish	170.47	6.46	24.95	5.11	119.70	1.76	80.92	2.70	0.15	30.39
LNV	All groups	711.46	7.13	115.13	24.87	107.19	1.92	21.70	21.90	0.12	16.56

Percentages

Food Group	Perish/non	Calories	Protein	Carbohydrates	Fat	Calcium	Iron	Vitamin A	Vitamin C	Thiamin	Folacin
Dairy	Perishable	2.7	3.2	1.3	4.4	15.2	0.5	9.7	0.2	1.1	1.9
Dairy	Non-perish	1.5	1.7	0.9	2.2	10.2	0.3	2.5	3.0	0.8	1.4
Eggs	Perishable	0.8	1.6	0.1	1.4	1.0	1.1	4.3	0.0	0.5	3.5
Meat	Perishable	6.7	13.5	0.6	11.6	1.2	5.4	1.7	0.1	6.2	2.3
Meat	Non-perish	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	0.0
Meat	Country	15.3	48.2	0.0	22.2	5.4	39.9	27.1	1.0	35.5	8.6
Alternates	Perishable	0.7	0.7	0.1	1.7	0.1	0.3	0.0	0.0	0.7	0.3
Alternates	Non-perish	0.9	0.9	0.3	1.9	0.3	0.5	0.1	0.1	1.6	1.0
Bread & Cereals	Perishable	3.2	2.4	4.7	1.1	2.9	4.4	0.3	0.0	4.9	6.6
Bread & Cereals	Non-perish	13.8	8.3	24.1	1.0	3.3	16.5	0.0	0.0	19.7	8.7
Citrus	Perishable	0.2	0.0	0.4	0.0	0.2	0.1	0.3	2.0	0.2	0.6
Citrus	Non-perish	0.5	0.1	0.8	0.2	0.3	0.6	0.7	5.2	0.4	0.5
Fruit	Perishable	0.5	0.1	1.1	0.1	0.2	0.3	0.2	0.8	0.3	1.0
Fruit	Non-perish	0.1	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Potatoes	Perishable	0.9	0.4	1.4	0.5	0.2	0.7	0.0	1.1	1.2	1.4
Potatoes	Non-perish	0.4	0.2	0.5	0.4	0.7	0.2	0.6	1.2	1.3	0.6
Vegetables	Perishable	0.4	0.5	0.7	0.1	0.8	0.9	17.5	3.5	0.9	4.2
Vegetables	Non-perish	0.2	0.1	0.3	0.0	0.1	0.2	3.7	0.3	0.2	1.7
Fats	Perishable	1.3	0.0	0.0	3.8	0.2	0.0	7.7	0.0	0.0	0.0
Fats	Non-perish	4.0	0.0	0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.0
Fats	Country	0.4	0.6	0.0	1.3	0.0	0.2	2.9	0.0	0.4	0.0
Sweets	Perishable	0.4	0.0	0.8	0.0	0.7	0.1	0.0	3.0	1.2	0.0
Sweets	Non-perish	8.2	0.1	16.3	0.5	17.5	0.8	0.0	61.3	0.5	0.1
Misc	Perishable	4.9	5.7	4.1	5.7	9.5	6.0	4.5	1.9	7.1	27.3
Misc	Non-perish	6.2	5.5	7.3	4.8	15.8	9.9	12.6	1.7	8.3	18.3
LNV	All groups	25.8	6.1	33.8	23.6	14.1	10.7	3.4	13.5	7.0	10.0
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 9. Mean amounts of country food and store meat, poultry, fish, by community (24-hour recall)

	Country meat, fish, poultry (g)	Store meat, fish, poultry (g)
Repulse Bay	237.7	62.5
Nain	178.6	117.7
Davis Inlet	345.8	204.2
Fort Severn	43.4	232.2
Pond Inlet 92	330.4	95.3
Pond Inlet 93	248.8	53.1
Arctic Bay	208.1	126.6
Coral Harbour	215.3	106.6
Gjoa Haven	246.1	66.7

Table 10. Mean weekly amounts of food, by community. (Based on food frequency questionnaire)

Community	Evap. milk, undiluted ml	Fresh Milk ml	Yogurt ml	Cheese g	Cheese slices units	Powd. milk/dill ml	Powd. milk/undill g	Eggs g	Country meat, fresh g	Country meat, dried g	Country poultry, fresh g
Repulse Bay (n=62)	80.6	704.3	133.8	203.6	1.4	0.0	0.0	148.7	1097.7	20.5	9.1
Nain (n=114)	369.8	405.3	42.5	199.7	1.2	83.8	0.0	176.4	727.5	137.2	71.1
Davis Inlet (n=57)	283.9	1055.6	0.0	9.3	3.3	41.5	0.0	404.9	446.9	334.0	110.3
Fort Severn (n=48)	663.9	1488.3	106.3	397.8	1.6	175.8	0.0	271.7	1045.7	4.3	1276.3
Pond Inlet (1992) (n=116)	180.3	620.0	123.8	660.2	1.4	79.8	0.7	174.5	1678.9	43.6	27.9
Pond Inlet (1993) (n=123)	179.6	764.9	106.8	111.4	0.7	38.9	2.2	144.6	948.4	49.2	6.4
Arctic Bay (n=74)	181.2	1340.2	208.8	121.9	1.4	143.4	1.6	187.4	1279.6	8.9	15.2
Coral Harbour (n=78)	299.3	626.0	60.8	49.9	1.5	30.9	0.0	100.8	1052.3	22.8	79.2
Gjoa Haven (n=121)	550.0	970.7	95.8	135.0	1.7	153.5	4.8	253.2	518.7	3.7	2.4
Community	Country poultry, dried g	Country fish, fresh g	Country fish, dried g	Country organ meat g	Store meat & poultry g	Canned fish g	Alternates perfish g	Alternates nonper. g	Bread slices	Crackers units	Cookies units
Repulse Bay (n=62)	0.5	208.0	8.7		516.4	67.9	137.4	382.7	16.0	36.6	8.4
Nain (n=114)	0.2	128.6	29.9		710.7	51.4	130.2	434.4	19.2	24.9	7.4
Davis Inlet (n=57)	5.8	68.6	20.1		814.6	24.1	267.0	524.1	16.2	7.3	7.5
Fort Severn (n=48)	98.9	14.1	9.1		517.3	47.3	207.2	474.9	24.2	22.7	1.9
Pond Inlet (1993) (n=116)	0.0	290.2	15.4		759.6	41.0	103.8	296.0	15.3	27.5	7.3
Pond Inlet (1993) (n=123)	0.0	117.2	0.3	77.7	828.1	43.7	109.0	407.8	8.7	38.1	8.5
Arctic Bay (n=74)	0.0	217.8	1.9	32.6	826.6	31.5	75.7	194.1	13.6	69.4	9.4
Coral Harbour (n=78)	0.0	151.4	0.7	52.1	577.5	8.6	86.3	207.8	13.7	22.6	8.7
Gjoa Haven (n=121)	0.0	244.3	3.7	69.0	473.2	41.0	90.4	315.7	15.0	93.6	6.6

Community	Cereal, pasta g	Fresh citrus g	Juice, frozen or boxes ml	Canned juice, tomatoes	Fresh fruit g	Canned fruit g	Potatoes, perish g	Potatoes, nonperish g	Chips g	Fresh vegetables g	Canned vegetables g
Repulse Bay (n=62)	861.8	102.7	231.4	201.7	364.8	54.4	150.9	168.9	272.4	88.4	138.7
Nain (n=114)	408.9	274.5	851.8	691.1	592.4	95.9	411.7	91.8	233.6	356.9	144.7
Davis Inlet (n=57)	741.3	223.6	33.5	557.4	469.8	70.4	414.8	30.3	241.9	253.1	71.6
Fort Severn (n=48)	597.0	410.4	690.2	865.5	925.2	96.6	353.7	332.1	380.6	235.7	180.8
Pond Inlet (1992) (n=116)	736.7	172.6	708.8	341.5	408.9	49.6	310.8	190.1	257.0	336.5	171.9
Pond Inlet (1993) (n=123)	897.4	208.5	350.7	204.1	617.6	76.9	187.8	128.1	374.9	366.6	201.5
Arctic Bay (n=74)	953.8	441.5	714.2	198.0	595.2	58.2	185.1	102.7	372.9	383.9	132.8
Coral Harbour (n=78)	729.7	196.8	429.4	89.6	489.9	81.2	138.4	197.2	231.0	174.3	166.1
Gjoa Haven (n=121)	1193.4	168.0	906.7	231.0	476.3	80.0	134.9	160.4	289.0	274.8	163.3

Community	Butter, marg g	Lard g	Sugar g	Tang	Other drink crystals ml	Chocolate bar	Candy piece	Pop can
Repulse Bay (n=62)	167.6	43.7	350.3	3031.1	2677.4	3.3	9.4	22.1
Nain (n=114)	191.9	26.3	229.5	2126.1	2502.8	1.3	13.9	15.3
Davis Inlet (n=57)	28.7	5.0	251.0	2904.5	466.4	1.9	20.8	9.9
Fort Severn (n=48)	117.3	45.0	181.4	2057.3	2003.4	1.0	4.6	3.7
Pond Inlet (1992) (n=116)	87.5	29.6	136.0	1894.9	2166.0	1.7	7.8	13.5
Pond Inlet (1993) (n=123)	434.0	4.3	131.2	1869.9	1865.1	3.0	5.5	8.9
Arctic Bay (n=74)	79.5	4.3	147.3	2109.0	1972.6	2.5	6.1	11.5
Coral Harbour (n=78)	121.2	5.8	206.8	2616.8	4362.5	4.0	9.7	10.5
Gjoa Haven (n=121)	77.8	5.3	40.0	3351.8	2037.5	3.0	3.3	7.3

Table 11. *Serving sizes used to estimate number of servings (Food Frequency)*

Food	Usual serving	Food	Usual serving
Country Meat, Poultry, Fish - fresh/smoked	100 g	Instant mashed potatoes, prepared	100 g
Country Meat, Poultry, Fish - dried	30 g	Carrots, cooked	100 g
Animal Blood	30 ml	Broccoli, fresh or frozen	82 g
Berries	125 ml	Canned peas	90 g
Liver (caribou, seal, walrus)	100 g	Canned corn	87 g
Eyes (caribou, seal, fish)	each	Frozen peas	85 g
Eggs	50 g	Frozen mixed vegetables	86 g
Packaged Luncheon Meats	50 g	Soda Crackers	11 g
Canned Luncheon Meats	50 g	Plain Cookies (Arrowroot, Social Teas)	13 g
Frozen beef patties or ground beef	100 g	Other cookies (eg. Oreos)	20 g
Salted Beef	100 g	White bread (fresh or toasted)	28 g
Salted Pork	15 g	Whole wheat or brown bread (fresh or toasted)	25 g
T-Bone steak and pork chops	100 g	Kraft dinner or other macaroni and cheese dinner made from mix	254 g
Frozen fried breaded chicken (eg. Flamingo/Schneiders)	100 g	Other Macaroni or spaghetti (made from plain dry type)	74 g
Chicken - Breast	86 g	Rice, cooked	85 g
- Legs	114 g	Oatmeal, cooked	174 g
- Wings	68 g	Potato chips	55 g
Frozen fish sticks	100 g	Butter, margarine, lard (spread)	5 g
Canned pink salmon or sardines	100 g	Sugar (in tea or coffee)	4.3 g
Canned beef stew (eg. Puritan)	259 g	Chocolate bar	56 g
Wieners	74 g	Beer	341 ml
Cooked yellow peas	207 g	Home brew or wine	250 ml
Cooked beans	189 g	Liquor (eg. Rye)	50 ml
Peanut butter	16 g	Cheez whiz	15 g
Pizza - small	100 g	Yogurt	175 g
- large	116 g	Milk (drink)	250 ml
Oranges	131 g	Coffee whitener	2 g
Cabbage	37 g		
Canned fruit cocktail	131 g		
Fruit drinks, juice	125 ml		
Canned tomatoes	125 ml		
Potatoes, fresh, cooked, frozen french fries	100 g		

Table 12a. Mean number of daily servings, 1992 and 1993. (Based on Food Frequency Questionnaire)

	Repulse Bay	Naini	Davis Inlet	Fort Severn	Pond Inlet 1992	Pond Inlet 1993	Arctic Bay	Coral Harbour	Gloa Haven
Dairy	1.75	2.03	1.60	3.94	4.11	1.37	1.97	1.19	2.20
Eggs	0.42	0.50	1.16	0.78	0.50	0.41	0.54	0.29	0.72
Store meat, fish	0.83	1.50	1.57	0.84	1.14	1.24	1.22	0.84	0.74
Country meat, fish	2.02	2.12	2.61	3.87	3.13	1.77	2.21	1.94	1.13
Alternates	1.04	0.80	1.39	1.13	0.70	0.68	0.37	0.51	0.63
Breads, cereals	4.80	4.62	3.59	5.09	4.41	3.53	5.26	3.97	5.80
Citrus	0.63	2.15	0.95	2.32	1.45	0.86	1.53	0.81	1.49
Fruit	0.50	0.79	0.61	1.29	0.52	0.78	0.75	0.67	0.64
Potatoes	0.46	0.72	0.64	0.98	0.72	0.45	0.41	0.48	0.42
Vegetables	0.43	0.89	0.54	1.02	1.14	1.18	1.13	0.71	0.93

Table 12b. Weekly frequency of consumption of foods, by community. (Based on Food Frequency Questionnaire)

	Never No. (%)	1-3x/mo No. (%)	1-3x/wk No. (%)	4-6x/wk No. (%)	7+/wk No. (%)
Repulse Bay (n=62)					
Country meat/fish	1 (2)	17 (27)	13 (21)	7 (11)	24 (39)
Store meat/fish	0	10 (16)	20 (32)	16 (26)	16 (26)
Fruit/fresh, canned	2 (3)	19 (31)	27 (43)	11 (18)	3 (5)
Carrots	37 (60)	19 (31)	6 (10)	0	0
Other vegetables	3 (5)	8 (13)	21 (34)	13 (21)	17 (27)
Dairy	1 (2)	6 (10)	10 (16)	6 (10)	39 (63)
Nain (n=116)					
Country meat/fish	1 (1)	10 (9)	51 (45)	17 (15)	35 (31)
Store meat/fish	1 (1)	2 (2)	30 (26)	31 (27)	50 (44)
Fruit/fresh, canned	8 (7)	17 (15)	39 (34)	27 (24)	23 (20)
Carrots	22 (19)	41 (36)	45 (40)	6 (5)	0
Other vegetables	1 (1)	5 (4)	19 (17)	21 (18)	68 (60)
Dairy	3 (3)	10 (9)	13 (11)	12 (10)	76 (67)
Davis Inlet (n=57)					
Country meat/fish	1 (2)	8 (14)	20 (35)	7 (12)	21 (37)
Store meat/fish	0	4 (7)	15 (26)	18 (32)	20 (35)
Fruit/fresh, canned	5 (9)	13 (23)	22 (39)	10 (18)	7 (12)
Carrots	33 (58)	16 (28)	5 (9)	2 (3)	1 (2)
Other vegetables	5 (9)	7 (12)	17 (30)	12 (21)	16 (28)
Dairy	8 (14)	2 (3)	9 (16)	5 (9)	33 (58)
Ft Severn (n=48)					
Country meat/fish	0	5 (10)	7 (15)	9 (19)	27 (56)
Store meat/fish	1 (2)	2 (4)	16 (33)	19 (40)	10 (21)
Fruit/fresh, canned	0	2 (4)	16 (33)	11 (23)	19 (40)
Carrots	21 (44)	19 (39)	8 (17)	0	0
Other vegetables	0	2 (4)	15 (31)	8 (17)	23 (48)
Dairy	0	1 (2)	0	2 (4)	45 (94)

	Never No. (%)	1-3x/mo No. (%)	1-3x/wk No. (%)	4-6x/wk No. (%)	7+/wk No. (%)
Pond Inlet 1992 (n=114)					
Country meat/fish	2 (2)	13 (11)	34 (29)	22 (19)	45 (39)
Store meat/fish	2 (2)	7 (6)	36 (31)	30 (26)	41 (35)
Fruit/fresh, canned	5 (4)	21 (18)	49 (42)	21 (18)	20 (17)
Carrots	34 (29)	49 (42)	29 (25)	3 (2)	1 (1)
Other vegetables	2 (2)	8 (7)	26 (22)	18 (16)	62 (53)
Dairy	4 (3)	7 (6)	13 (11)	11 (9)	81 (70)
Pond Inlet 1993 (n=123)					
Country meat/fish	0	7 (6)	46 (37)	23 (19)	47 (38)
Store meat/fish	1 (1)	11 (9)	43 (35)	27 (22)	41 (33)
Fruit/fresh, canned	5 (4)	22 (18)	44 (36)	16 (13)	36 (29)
Carrots	43 (35)	46 (37)	25 (20)	3 (2)	6 (5)
Other vegetables	0	13 (11)	41 (33)	18 (15)	51 (41)
Dairy	4 (3)	10 (8)	15 (12)	10 (8)	84 (68)
Arctic Bay (n=74)					
Country meat/fish	2 (3)	14 (19)	24 (32)	10 (14)	24 (32)
Store meat/fish	0	0	24 (32)	20 (27)	30 (40)
Fruit/fresh, canned	1(1)	9 (12)	20 (27)	15 (20)	29 (39)
Carrots	21 (28)	32 (43)	18 (24)	3 (4)	0
Other vegetables	0	4 (5)	16 (22)	19 (26)	35 (47)
Dairy	0	2 (3)	8 (11)	5 (7)	59 (80)
Coral Harbour (n=78)					
Country meat/fish	0	3 (4)	32 (41)	23 (29)	20 (26)
Store meat/fish	1 (1)	6 (8)	34 (44)	22 (28)	15 (19)
Fruit/fresh, canned	0	7 (9)	38 (49)	19 (24)	14 (18)
Carrots	29 (37)	34 (44)	15 (19)	0	0
Other vegetables	1 (1)	5 (6)	23 (29)	23 (29)	26 (33)
Dairy	2(3)	1 (1)	11 (14)	8 (10)	56 (72)
Gjoa Haven (n=121)					
Country meat/fish	2 (1)	20 (17)	60 (50)	24 (20)	15 (12)
Store meat/fish	0	6 (5)	63 (52)	30 (25)	22 (18)
Fruit/fresh, canned	1 (1)	14 (12)	61 (50)	27 (22)	18 (15)
Carrots	43 (36)	61 (50)	16 (13)	1 (1)	0
Other vegetables	0	13 (11)	51 (42)	24 (20)	33 (27)
Dairy	2 (2)	5 (4)	14 (12)	16 (13)	84 (69)

Table 13. Actual price change for selected foods by community and year

Food Product	Price Change from Previous Year						
	Repulse Bay	Nain*	Fort Severn	Pond 1992	Pond 1993	Arctic Bay	Gloa Haven
Milk, fresh or UHT (L)	(\$0.01)	(\$0.15)	\$0.52	(\$0.79)	(\$0.38)	(\$0.19)	(\$0.33)
Cheese (kg)	\$0.12	\$0.54	(\$0.93)	\$0.37	(\$0.05)	0.00	\$0.14
Eggs (doz)	(\$1.93)	\$0.17	(\$0.12)	(\$0.83)	\$0.18	(\$0.33)	(\$0.04)
Meat, fresh or frozen (kg)	(\$0.47)	\$1.00	\$0.80	(\$0.26)	(\$1.14)	(\$0.94)	\$1.42
Fresh fruit (kg)	(\$0.07)	(\$0.06)	(\$2.03)	(\$1.75)	(\$0.10)	(\$0.94)	(\$0.45)
Vegetables, fresh or frozen (kg)	(\$0.73)	(\$0.50)	\$0.12	(\$1.26)	(\$0.12)	(\$0.02)	(\$0.50)
Apple or orange juice (L)	\$0.88	(\$0.15)	\$0.29	(\$0.10)	\$0.00	(\$0.60)	(\$1.12)
Pizza (630 g)	(\$1.25)	(\$1.25)	(\$0.67)	\$0.00	NA	NA	NA
Milk powder (500 g)	(\$0.01)	\$0.13	\$0.08	(\$0.09)	\$0.00	0.08	0.00
Evaporated milk (385 ml)	(\$0.19)	\$0.19	\$0.15	(\$0.31)	\$0.56	0.50	0.28
Canned meat or fish (kg)	(\$0.06)	\$0.62	(\$1.38)	\$0.50	(\$0.92)	\$0.12	(\$0.20)
Canned meat (e.g. Kikk) (kg)	\$0.03	\$1.56	(\$1.59)	\$0.00	\$0.36	0.42	0.00
Canned fruit (398 ml)	(\$1.27)	\$1.26	\$0.07	(\$1.36)	(\$0.14)	\$0.28	\$1.87
Canned vegetables (kg)	\$0.00	(\$1.68)	(\$1.07)	\$0.34	\$0.54	\$0.33	\$0.08
Infant formula (not cream or evaporated milk),dry (450 g)	\$0.00	\$0.84	NA	\$1.81	NA	NA	NA
Lard (454 g)	\$0.00	\$0.44	(\$0.11)	\$0.27	\$0.24	0.08	0.07
Candy (Chocolate bar)	\$0.25	NA	\$0.00	\$0.13	\$0.00	\$0.16	0.00
Pop (355 ml)	\$0.00	NA	(\$0.35)	\$0.11	\$0.05	\$0.05	0.00

* 1992 prices are compared with 1990 winter prices since the 1991 survey was conducted while marine service was still available.

Table 14a. Changes in consumption from previous year: Country and store food, Repulse Bay, 1992.

	Total N	Don't Eat %	More %	Less %	Same %	Price Change 91-92 %
Country Food						
Caribou	62	0.0	9.7	19.4	71.0	
Seal	62	19.4	4.8	43.6	32.3	
Whale	62	67.7	4.8	11.3	16.1	
Walrus	61	52.5	6.6	13.1	27.9	
Salmon/Trout	53	64.2	7.6	20.8	7.6	
Char	62	22.6	19.4	12.9	45.2	
Rabbit	62	79.0	0.0	9.7	11.3	
Ducks/Geese	62	62.9	0.0	19.4	17.7	
Ptarmigan	61	65.6	0.0	21.3	13.1	
Store Food						
Milk, fresh or UHT	61	47.5	3.3	21.3	27.9	-0.3
Cheese	62	21.0	8.1	25.8	45.2	4.8
Eggs	58	22.4	10.3	19.0	45.3	-38.7
Meat, fresh or frozen	62	16.1	8.1	25.8	50.0	-3.6
Canned Meat or fish	62	51.6	1.6	21.0	25.8	-0.5
Pizza	62	16.1	12.9	21.0	50.0	-13.3
Fresh Fruit	62	16.1	6.5	29.0	48.4	-1.3
Apple or orange juice	61	18.0	6.6	21.3	54.1	40.0
Canned Fruit	62	41.9	1.6	24.2	32.3	-19.9
Vegetables, fresh or frozen	62	53.2	1.6	17.7	27.4	-13.2
Canned vegetables	61	37.7	8.2	13.1	41.0	0.0
Cookies, sweet (eg Oreos)	62	19.4	3.2	27.4	50.0	0.0
Candy	61	14.8	11.5	31.2	42.6	25.0
Pop	62	1.6	27.4	11.3	59.7	0.0

Table 14b. *Changes in consumption from previous year: Country and store food, Nain, 1992.*

	Total N	Don't Eat %	More %	Less %	Same %	Price Change 90/92 %
Country Food						
Caribou	114	0.8	28.1	14.0	57.0	
Seal	114	29.8	2.6	49.1	18.4	
Whale	112	97.3	0.0	2.7	0.0	
Walrus	112	98.2	0.0	1.8	0.0	
Salmon/Trout	114	22.8	1.8	45.6	29.8	
Char	113	12.4	2.7	47.8	37.2	
Rabbit	113	61.1	0.0	23.9	15.0	
Ducks/Geese	113	32.7	4.4	30.1	32.7	
Ptarmigan	114	20.2	7.0	48.3	24.6	
Cod	113	31.0	4.4	40.7	23.9	
Other Fish	99	82.8	6.1	4.0	7.1	
Store Food						
Milk, fresh or UHT	113	32.7	7.1	16.8	43.4	-8.3
Cheese	114	34.2	5.3	19.3	41.2	31.6
Eggs	114	5.3	12.3	15.8	66.7	5.3
Meat, fresh or frozen	113	2.7	16.8	15.0	65.5	13.1
Canned meat or fish	114	48.3	2.6	12.3	36.8	6.6
Pizza	111	37.8	7.2	19.8	35.1	-13.3
Fresh fruit	112	15.2	15.2	27.7	42.0	-2.0
Apple or orange juice	114	12.3	21.1	11.4	55.3	-10.8
Canned fruit	114	38.6	1.8	15.8	43.9	41.4
Vegetables, fresh or frozen	114	26.3	14.0	8.8	50.9	-29.9
Canned vegetables	113	45.1	2.7	11.5	40.7	-36.1
Cookies, sweet (eg Oreos)	114	29.8	7.9	18.4	43.9	N/A
Candy	113	25.7	11.5	22.1	40.7	NA
Pop	114	1.8	36.8	7.0	54.4	NA

Table 14c. *Changes in consumption from previous year: Country and store food, Davis Inlet, 1992.*

	Total N	Don't Eat %	More %	Less %	Same %
Country Food					
Caribou	57	1.8	57.9	15.8	24.6
Seal	57	94.7	0.0	1.8	3.5
Whale	57	98.3	0.0	1.8	0.0
Walrus	57	98.3	0.0	1.8	0.0
Salmon/Trout	57	66.7	7.0	15.8	10.5
Char	56	66.1	7.1	14.3	12.3
Rabbit	56	78.6	0.0	14.3	7.1
Ducks/Geese	57	59.7	10.5	14.0	15.8
Ptarmigan	56	83.9	3.6	5.4	7.1
Cod	57	84.2	5.3	3.5	7.0
Other Fish	56	89.3	1.8	5.4	3.6
Store Food					
Milk, fresh or UHT	56	21.4	12.5	32.1	33.9
Cheese	56	33.9	7.1	30.4	28.6
Eggs	57	7.0	33.3	15.8	43.9
Meat, fresh or frozen	57	10.5	28.1	15.8	45.6
Canned meat or fish	56	60.7	17.9	12.5	8.9
Pizza	57	56.1	8.8	21.1	14.0
Fresh fruit	57	63.2	10.5	8.8	17.5
Apple or orange juice	57	15.8	31.6	19.3	33.3
Canned fruit	56	60.7	7.1	19.6	12.5
Vegetables, fresh or frozen	56	58.9	8.9	14.3	17.9
Canned vegetables	56	60.7	7.1	12.5	19.6
Cookies, sweet (eg Oreos)	57	33.3	22.8	17.5	26.3
Candy	57	36.8	28.1	15.8	19.3
Pop	57	3.5	56.1	12.3	28.1

Table 14d. *Changes in consumption from previous year: Country and store food, Fort Severn, 1992.*

	Total N	Don't Eat	More	Less	Same	Price Change 91- 92
		%	%	%	%	%
Country Food						
Caribou	48	0.0	22.9	29.2	47.9	
Seal	34	100.0				
Whale	34	100.0				
Walrus	34	100.0				
Salmon/Trout	42	54.8	2.8	28.6	14.3	
Char	34	100.0				
Rabbit	47	51.1	4.3	25.5	18.8	
Ducks/Geese	48	0.0	22.9	18.8	58.3	
Ptarmigan	47	17.0	6.4	29.8	46.8	
Other Fish	41	73.2	4.9	12.2	9.8	
Store Food						
Milk, fresh or UHT	48	10.4	18.8	22.9	47.9	19.4
Cheese	48	25.0	8.3	22.9	43.8	-25.4
Eggs	48	8.3	6.3	22.9	62.5	-4.3
Meat, fresh or frozen	48	6.3	8.3	25.0	60.4	6.5
Canned meat or fish	48	43.8	8.3	20.8	27.1	-11.1
Pizza	48	16.7	12.5	41.7	29.2	-7.6
Fresh fruit	48	0.0	20.8	16.7	62.5	-37.0
Apple or orange juice	48	4.2	18.8	10.4	66.7	17.6
Canned fruit	48	31.3	6.3	27.1	35.4	1.1
Vegetables, fresh or frozen	48	12.5	10.4	25.0	52.1	3.7
Canned vegetables	48	20.8	8.3	10.4	60.4	-10.4
Cookies, sweet (eg Oreos)	48	33.3	4.2	20.8	41.7	1.0
Candy	48	37.5	4.2	20.8	37.5	0.0
Pop	46	15.2	15.2	17.4	52.2	-21.2

Table 14e. *Changes in consumption from previous year: Country and store food, Pond Inlet, 1992.*

	Total N	Don't Eat	More	Less	Same	Price Change 91- 92
		%	%	%	%	%
Country Food						
Caribou	116	0.9	38.8	19.5	40.5	
Seal	116	11.2	17.2	49.1	22.4	
Whale	116	76.7	2.6	12.9	7.8	
Walrus	114	57.9	7.0	22.8	12.3	
Salmon/Trout	104	90.4	1.9	2.9	4.8	
Char	114	7.0	26.3	21.1	45.6	
Rabbit	115	71.3	1.7	14.8	12.1	
Ducks/Geese	116	67.2	2.6	11.2	19.0	
Ptarmigan	115	72.2	11.3	10.4	6.0	
Store Food						
Milk, fresh or UHT	116	19.0	18.1	17.2	45.7	-18.6
Cheese	115	27.0	15.7	19.	38.3	13.5
Eggs	114	25.4	13.2	21.9	39.5	-18.9
Meat, fresh or frozen	116	10.3	27.6	24.1	37.9	-1.8
Canned meat or fish	116	64.7	4.3	14.7	16.4	3.6
Pizza	115	7.0	35.7	23.5	33.9	NA
Fresh fruit	113	9.7	34.5	15.0	40.7	-28.9
Apple or orange juice	115	17.4	22.6	12.1	47.8	-4.6
Canned fruit	115	43.5	3.5	19.1	33.9	-17.2
Vegetables, fresh or frozen	115	11.3	27.0	12.1	49.6	-26.0
Canned vegetables	116	37.9	10.3	16.4	35.3	3.9
Cookies, sweet (eg Oreos)	115	17.4	18.3	31.3	33.0	0.0
Candy	115	31.3	10.3	34.8	23.5	14.6
Pop	116	2.6	44.0	17.2	36.2	7.1

Table 14f. *Changes in consumption from previous year: Country and store food, Pond Inlet, 1993.*

	Total N	Don't Eat %	More %	Less %	Same %	Price Change 92-93 %
Country Food						
Caribou	123	0	43.9	13.8	42.3	
Seal	122	9.8	7.4	55.7	27.1	
Whale	104	61.5	1	16.4	21.2	
Walrus	120	49.2	9.2	19.2	22.5	
Salmon/Trout	48	91.7	0	4.2	4.2	
Char	121	12.4	11.6	32.2	43.8	
Rabbit	121	78.5	2.5	10.7	8.3	
Ducks/Geese	120	70.8	0	11.7	17.5	
Ptarmigan	118	75.4	0.9	14.4	9.3	
Cod	53	96.2	0	1.9	1.9	
Other Fish	120	86.7	5	3.3	5	
Store Food						
Milk, fresh or UHT	123	27.6	14.6	19.5	38.2	-11.0
Cheese	123	26.8	12.2	24.4	36.6	-1.6
Eggs	122	17.1	13.9	19.7	49.2	5.0
Meat, fresh or frozen	122	5.7	27.1	16.4	50.8	-8.1
Canned meat or fish	121	59.5	3.3	11.6	25.6	-7.0
Pizza	122	6.6	28.7	21.3	43.4	7.3
Fresh fruit	122	10.7	27.1	16.4	45.9	-2.3
Apple or orange juice	122	20.5	18	18	43.4	0.0
Canned fruit	121	40.5	4.1	24	31.4	-2.1
Vegetables, fresh or frozen	123	19.5	20.3	11.4	48.8	-3.3
Canned vegetables	121	33.9	3.3	18.2	44.6	6.0
Cookies, sweet (eg Oreos)	122	23.8	12.3	30.3	33.6	4.2
Candy	122	23.8	9	35.3	32	0.0
Pop	123	1.6	39.8	18	40.7	-3.9

Table 14g. Changes in consumption from previous year: Country and store food, Arctic Bay, 1993.

	Total N	Don't Eat %	More %	Less %	Same %	Price Change 92-93 %
Country Food						
Caribou	74	4.1	28.4	23	44.6	
Seal	74	20.3	2.7	44.6	32.4	
Whale	72	63.9	2.9	8.3	25	
Walrus	72	61.1	5.6	13.9	19.4	
Salmon/Trout	72	93.1	0	2.8	4.2	
Char	74	20.3	14.9	27	37.8	
Rabbit	74	66.2	4.1	13.5	16.2	
Ducks/Geese	73	84.9	0	6.9	8.2	
Ptarmigan	74	63.5	2.7	17.6	16.2	
Cod	73	95.9	0	4.1	0	
Other Fish	73	95.9	0	1.4	2.7	
Store Food						
Milk, fresh or UHT	74	17.6	13.5	17.6	51.4	-4.6
Cheese	74	25.7	10.8	12.2	51.4	22.7
Eggs	71	14.1	9.9	16.9	59.2	-7.9
Meat, fresh or frozen	74	2.7	17.6	18.9	60.8	-6.3
Canned meat or fish	73	52.1	2.7	16.4	28.7	1.0
Pizza	73	4.1	20.5	13.7	61.6	10.2
Fresh fruit	74	1.4	14.9	27	56.8	-18.4
Apple or orange juice	73	9.6	15.1	12.3	63	-23.6
Canned fruit	74	40.5	0	20.3	39.2	4.6
Vegetables, fresh or frozen	73	12.3	15.1	13.7	58.9	-0.5
Canned vegetables	74	32.4	4.1	18.9	44.6	3.6
Cookies, sweet (eg Oreos)	74	28.4	1.4	25.7	44.6	NA
Candy	74	32.4	9.5	20.3	37.8	15.0
Pop	74	9.5	25.7	10.8	54.1	2.7

Table 14h. *Changes in consumption from previous year: Country and store food, Coral Harbour, 1993.*

	Total N	Don't Eat %	More %	Less %	Same %
Country Food					
Caribou	78	0	26.9	15.4	57.7
Seal	78	5.1	3.9	51.3	39.7
Whale	78	44.9	7.7	18.0	29.5
Walrus	78	28.2	2.6	29.5	39.7
Salmon/Trout	78	78.2	1.3	5.1	15.4
Char	78	5.1	12.8	23.1	59.0
Rabbit	78	93.6	0	5.1	1.3
Ducks/Geese	78	2.6	9.0	21.8	66.7
Ptarmigan	78	34.6	10.3	23.1	32.1
Cod	78	66.7	0	10.3	23.1
Other Fish	66	90.9	1.5	0	7.6
Store Food					
Milk, fresh or UHT	78	21.8	18.0	12.8	47.4
Cheese	78	16.7	10.3	11.5	61.5
Eggs	78	9.0	6.4	20.5	64.1
Meat, fresh or frozen	78	2.6	14.1	20.5	62.8
Canned meat or fish	78	61.5	0	10.3	28.2
Pizza	76	10.5	13.2	21.1	55.3
Fresh fruit	77	1.3	20.8	13.0	64.9
Apple or orange juice	78	14.1	15.4	5.1	65.4
Canned fruit	78	20.5	6.4	23.1	50.0
Vegetables, fresh or frozen	77	11.7	5.2	16.9	66.2
Canned vegetables	77	24.7	3.9	13.0	58.4
Cookies, sweet (eg Oreos)	77	27.3	2.6	20.8	49.4
Candy	78	14.1	18.0	16.7	51.3
Pop	78	2.6	34.6	7.7	55.1

Table 14i. Changes in consumption from previous year: Country and store food, Gjoa Haven, 1993.

	Total N	Don't Eat %	More %	Less %	Same %	Price Change 92-93
Country Food						
Caribou	121	1.7	21.5	40.5	36.4	
Seal	121	47.1	0.0	45.5	7.4	
Whale	121	92.6	0.0	5.8	1.7	
Walrus	119	80.7	1.7	16.8	0.8	
Salmon/Trout	119	45.4	5.9	25.2	23.5	
Char	120	14.2	13.3	32.5	40.0	
Rabbit	121	97.5	0.8	1.70	0.0	
Ducks/Geese	121	65.30	2.	24.80	7.4	
Ptarmigan	120	90.80	0.00	6.70	2.5	
Cod	120	95.80	0.00	2.50	1.7	
Other Fish	100	72.00	2.00	8.00	18.0	
Store Food						
Milk, fresh or UHT	96	33.3	6.3	27.1	33.3	-9.2
Cheese	96	14.6	9.4	29.2	46.9	5.3
Eggs	95	7.4	10.5	33.7	48.4	-1.2
Meat, fresh or frozen	91	7.7	7.7	34.1	50.6	13.7
Canned meat or fish	96	51.0	5.2	29.2	14.60	-1.7
Pizza	95	7.4	7.4	40.0	45.3	14.0
Fresh fruit	95	1.1	11.6	32.6	54.7	-9.0
Apple or orange juice	95	8.4	11.6	24.2	55.8	-37.3
Canned fruit	96	16.7	4.2	37.5	41.7	39.0
Vegetables, fresh or frozen	96	15.6	10.4	34.4	39.6	-10.6
Canned vegetables	96	40.6	2.1	30.2	27.1	0.8
Cookies, sweet (eg Oreos)	96	17.2	4.2	40.6	37.5	0.0
Candy	96	13.5	1.0	51.0	34.4	0.0
Pop	95	1.1	20.0	17.9	61.1	0.0

Table 15a. *Perception of price change from previous year and actual price change, Repulse Bay, 1992.*

	Total N	Price Went Up %	Price Went Down %	No Change %	Don't Know %	Actual Price Change 91-92 %
Fresh milk	55	60.0	1.8	3.6	34.6	-0.3
Milk powder	55	38.2	0.0	7.3	54.6	0.9
Evaporated milk	55	67.3	10.9	10.9	10.9	-8.7
Meat (fresh or frozen)	54	85.2	0.0	5.6	9.3	-3.6
Canned meat (e.g. Kliek)	54	68.5	1.9	11.1	18.5	0.3
Prepared foods (e.g. Pizza)	55	80.0	0.0	5.5	14.6	-13.3
Fresh fruit	55	69.1	1.8	12.7	16.4	-1.3
Fruit juice (not drinks)	55	67.3	0.0	12.7	20.0	40.0
Vegetables (fresh or frozen)	55	70.9	1.8	5.5	21.8	-13.2
Canned vegetables	54	55.6	0.0	18.5	25.9	0.0
Infant formula (not cream or evaporated milk)	55	56.4	0.0	3.6	40.0	0.0
Lard	55	61.8	1.8	16.4	20.0	0.0

Table 15b. *Perception of price change from previous year and actual price change, Nain, 1992.*

	Total N	Price Went Up %	Price Went Down %	No Change %	Don't Know %	Actual Price Change 90-92 %
Fresh milk	96	38.5	0	7.3	55.2	-8.3
Milk powder	80	16.4	0	2.1	81.1	15.7
Evaporated milk	80	71.9	0	7.3	20.8	13.9
Meat (fresh or frozen)	80	68.1	1.1	4.3	26.6	13.1
Canned meat (e.g. Klik)	80	51.0	0	6.3	42.7	23.5
Prepared foods (e.g. Pizza)	80	51.0	0	5.2	43.8	NA
Fresh fruit	80	76.0	1.0	3.1	19.8	-2.0
Fruit juice (not drinks)	80	45.3	1.1	11.6	42.1	-10.8
Vegetables (fresh or frozen)	80	50.0	2.1	9.4	38.5	-29.9
Canned vegetables	80	32.6	1.1	8.4	57.9	-36.1
Infant formula (not cream or evaporated milk)	80	37.5	1.0	1.0	60.4	5.9
Lard	80	37.9	0	8.4	53.7	14.8

Table 15c. *Perception of price change from previous year, Davis Inlet, 1992.*

	Total N	Price Went Up	Price Went Down	No Change	Don't Know
		%	%	%	%
Fresh milk	51	39.2	5.8	11.8	43.1
Milk powder	51	29.4	5.8	0.0	64.7
Evaporated milk	51	37.3	5.8	25.5	31.4
Meat (fresh or frozen)	50	68.0	8.0	8.0	16.0
Canned meat (e.g. Klik)	51	49.0	7.8	11.8	31.8
Prepared foods (e.g. Pizza)	49	44.9	4.0	4.0	46.9
Fresh fruit	51	25.5	9.8	11.8	52.9
Fruit juice (not drinks)	51	21.6	5.8	17.7	54.9
Vegetables (fresh or frozen)	51	39.2	2.0	9.8	49.0
Canned vegetables	50	22.0	4.0	12.0	62.0
Infant formula (not cream or evaporated milk)	51	52.9	3.9	2.0	41.2
Lard	51	5.9	3.9	7.8	82.4

Table 15d. Perception of price change from previous year and actual price change, Fort Severn, 1992.

	Total N	Price Went Up	Price Went Down	No Change	Don't Know	Actual Price Change 91-92
		%	%	%	%	%
Fresh milk	37	81.1	0.0	2.7	16.2	19.4
Milk powder	37	43.2	0.0	2.7	54.1	7.1
Evaporated milk	37	81.1	5.4	2.7	10.8	8.2
Meat (fresh or frozen)	38	79.0	0.0	2.6	18.4	6.5
Canned meat (e.g. Klik)	37	78.4	0.0	2.7	18.9	-13.7
Prepared foods (e.g. Pizza)	37	81.1	0.0	8.1	10.8	-7.6
Fresh fruit	38	81.6	0.0	0.0	18.4	-37.0
Fruit juice (not drinks)	37	83.8	0.0	0.0	16.2	17.6
Vegetables (fresh or frozen)	38	73.7	0.0	2.6	23.7	3.7
Canned vegetables	37	70.3	0.0	5.4	24.3	-10.4
Infant formula (not cream or evaporated milk)	37	62.2	0.0	0.0	37.8	
Lard	37	83.8	0.0	8.1	8.1	-2.4

Table 15e. Perception of price change from previous year and actual price change, Pond Inlet, 1992.

	Total N	Price Went Up	Price Went Down	No Change	Don't Know	Actual Price Change 91-92
		%	%	%	%	%
Fresh milk	80	60.0	2.5	6.3	31.3	-18.6
Milk powder	80	36.3	0	6.3	57.5	-8.1
Evaporated milk	80	40.0	13.8	18.8	27.5	-17.9
Meat (fresh or frozen)	80	68.8	0	10.0	21.3	-1.8
Canned meat (e.g. Klik)	80	42.5	0	13.8	43.8	0.0
Prepared foods (e.g. Pizza)	80	72.5	0	10.0	17.5	NA
Fresh fruit	80	45.0	8.8	17.5	28.8	-28.9
Fruit juice (not drinks)	80	42.5	0	15.0	42.5	-4.6
Vegetables (fresh or frozen)	80	47.5	5.0	17.5	30.0	-26.0
Canned vegetables	80	35.0	0	17.5	47.5	3.9
Infant formula (not cream or evaporated milk)	80	43.8	0	6.3	50.0	11.7
Lard	80	42.5	2.5	16.3	38.8	5.8

Table 15f. Perception of price change from previous year and actual price change, Pond Inlet, 1993.

	Total N	Price Went Up %	Price Went Down %	No Change %	Don't Know %	Actual Price Change 92-93
Fresh milk	99	44.4	1	13.1	41.4	-11.0
Milk powder	99	51.5	0	7.1	41.4	0.0
Evaporated milk	99	54.6	2	15.2	28.3	39.4
Meat (fresh or frozen)	96	71.9	2.1	9.4	16.7	-8.1
Canned meat (e.g. Klik)	99	53.5	0	10.1	36.4	3.5
Prepared foods (e.g. Pizza)	99	74.8	0	9.1	16.2	7.3
Fresh fruit	98	50	5.1	18.4	26.5	-2.3
Fruit juice (not drinks)	99	47.5	0	13.1	39.4	0.0
Vegetables (fresh or frozen)	99	51.5	2	19.2	27.3	-3.3
Canned vegetables	99	51.5	0	10.1	38.4	6.0
Infant formula (not cream or evaporated milk)	99	51.5	0	3	45.5	5.8
Lard	99	48.5	1	21.2	29.3	10.7

Table 15g. Perception of price change from previous year and actual price change, Arctic Bay, 1993.

	Total N	Price Went Up	Price Went Down	No Change	Don't Know	Actual Price Change 92-93
		%	%	%	%	%
Fresh milk	47	48.9	2.1	6.4	42.6	-4.6
Milk powder	47	53.2	2.1	8.5	36.2	7.1
Evaporated milk	47	40.3	4.3	8.5	46.8	25.9
Meat (fresh or frozen)	47	61.7	4.3	17	17	-6.3
Canned meat (e.g. Klik)	47	42.6	0	21.3	36.2	4.1
Prepared foods (e.g. Pizza)	47	66	2.1	17	14.9	10.2
Fresh fruit	47	63.8	2.1	12.8	21.3	-18.4
Fruit juice (not drinks)	47	42.6	0	17	40.4	-23.6
Vegetables (fresh or frozen)	47	57.5	0	19.2	23.4	-0.5
Canned vegetables	47	34	2.1	8.5	55.3	3.6
Infant formula (not cream or evaporated milk)	47	53.2	0	6.4	40.8	0.0
Lard	47	34	2.1	23.4	40.3	3.6

Table 15h. Perception of price change from previous year and actual price change, Coral Harbour, 1993.

	Total N	Price Went Up %	Price Went Down %	No Change %	Don't Know %
Fresh milk	68	54.4	1.5	14.7	29.4
Milk powder	68	42.7	0	7.4	50.0
Evaporated milk	68	69.1	1.5	17.7	11.8
Meat (fresh or frozen)	68	85.3	2.9	4.4	7.4
Canned meat (e.g. Klik)	67	40.3	3.0	16.4	40.3
Prepared foods (e.g. Pizza)	68	64.7	0	10.3	25.0
Fresh fruit	68	69.1	0	13.2	17.7
Fruit juice (not drinks)	68	47.1	0	16.2	36.8
Vegetables (fresh or frozen)	68	60.3	1.5	11.8	26.5
Canned vegetables	68	44.1	1.5	23.5	30.9
Infant formula (not cream or evaporated milk)	68	44.1	1.5	1.5	52.9
Lard	68	44.1	0	29.4	26.5

Table 15i. Perception of price change from previous year and actual price change, Gjoa Haven, 1993.

	Total N	Price Went Up %	Price Went Down %	No Change %	Don't Know %	Actual Price Change 92-93
Fresh milk	75	60	1.3	5.3	33.3	9.2
Milk powder	75	41.3	1.3	5.3	52	0.0
Evaporated milk	75	68	1.3	13.3	17.3	14.4
Meat (fresh or frozen)	75	73.3	1.3	1.3	24	13.7
Canned meat (e.g. Klik)	75	66.7	0	8	25.3	0.0
Prepared foods (e.g. Pizza)	75	78.7	0	8	13.3	14.0
Fresh fruit	75	61.3	5.3	12	21.3	-9.0
Fruit juice (not drinks)	75	56	0	12	32	-37.3
Vegetables (fresh or frozen)	75	56	1.3	14.7	28	-10.6
Canned vegetables	75	53.3	0	8	38.7	0.8
Infant formula (not cream or evaporated milk)	75	69.3	1.3	1.3	28	-1.2
Lard	75	58.7	0	16	25.3	1.4

Table 16. *Perception of changes in quality and variety of fresh fruit and vegetables, 1992 & 1993.*

	Quality				Variety			
	Better	Worse	No change	DK	More	Less	No change	DK
	%	%	%	%	%	%	%	%
Repulse Bay	11.3	16.1	22.6	48.4	14.5	12.9	25.8	45.2
Nain	15.8	23.7	36.8	17.5	16.7	36.0	25.4	16.7
Davis Inlet	3.5	12.3	38.6	45.6	3.5	15.8	29.8	50.9
Fort Severn	10.4	22.9	31.3	35.4	8.3	8.3	47.9	33.3
Pond Inlet 1992	21.6	15.5	32.5	30.2	32.8	16.4	23.3	27.6
Pond Inlet 1993	11.4	13.0	41.5	34.2	16.3	7.3	42.3	34.2
Arctic Bay	13.5	4.1	37.8	44.6	19.4	2.8	31.9	45.8
Coral Harbour	26.9	16.7	25.6	30.8	28.2	12.8	38.5	20.5
Gjoa Haven	14.7	23.2	28.4	33.7	11.6	35.8	20.0	32.6

Table 17a. *Change in weekly cost of Food Groups, Repulse Bay, 1991-92*

Food Group	Perishables Cost		Difference	
	1991	1992		
	\$	\$	\$	%
Dairy	16.11	16.12	0.01	0.0
Eggs	7.48	4.59	-2.89	-38.7
Meat, Fish,Poultry	29.90	31.64	1.74	5.8
Meat Alternates	1.20	1.12	-0.08	-6.4
Cereal & Bakery	11.50	9.89	-1.61	-14.0
Citrus	5.41	6.54	1.13	20.9
Other Fruit	30.80	28.25	-2.55	-8.3
Potatoes	30.03	26.01	-4.02	-13.4
Other Vegetables	10.76	9.69	-1.07	-10.0
Fats & Oils	2.77	2.51	-0.25	-9.2
Sugar & Sweets	-	-	-	-
All Food Groups	145.97	136.37	-9.60	-6.6

Food Group	Nonperishables Cost		Difference	
	1991	1992		
	\$	\$	\$	%
Dairy	23.73	21.72	-2.01	-8.5
Eggs	-	-	-	-
Meat, Fish,Poultry	1.44	1.43	-0.01	-0.8
Meat Alternates	7.43	7.38	-0.05	-0.6
Cereal & Bakery	34.02	33.72	-0.30	-0.9
Citrus	5.66	5.66	0.00	0.0
Other Fruit	4.10	3.29	-0.81	-19.8
Potatoes	-	-	-	-
Other Vegetables	48.41	48.41	0.00	0.0
Fats & Oils	3.16	3.16	0.00	0.0
Sugar & Sweets	5.29	5.30	0.01	0.2
All Food Groups	147.20	143.39	-3.81	-2.6

Food Group	Northern Food Basket*		Difference	
	1991	1992		
	\$	\$	\$	%
Dairy	39.84	37.84	-2.00	-5.0
Eggs	7.48	4.59	-2.89	-38.7
Meat, Fish,Poultry	31.34	33.07	1.73	5.5
Meat Alternates	8.63	8.51	-0.12	-1.4
Cereal & Bakery	45.52	43.61	-1.91	-4.2
Citrus	11.07	12.21	1.13	10.2
Other Fruit	34.90	31.54	-3.36	-9.6
Potatoes	30.03	26.01	-4.02	-13.4
Other Vegetables	59.17	58.10	-1.07	-1.8
Fats & Oils	5.92	5.67	-0.25	-4.3
Sugar & Sweets	5.29	5.30	0.01	0.2
All Food Groups	293.17	279.76	-13.41	-4.6

* Adapted from Agriculture Canada's Thrifty Nutritious Food Basket. Meets nutrient requirements of a family of four: man and woman (25-49 years); boy (13-15 years) and girl (7-9 years).

Table 17b. *Change in weekly cost of Food Groups, Nain 1990-92*

Food Group	Perishables			
	Cost		Difference	
	1990	1992		
	\$	\$	\$	%
Dairy	7.61	7.16	-0.45	-5.9
Eggs	4.84	5.10	0.26	5.3
Meat, Fish,Poultry	17.75	17.55	-0.20	-1.2
Meat Alternates	0.48	0.72	0.24	50.4
Cereal & Bakery	5.60	5.78	0.18	3.2
Citrus	3.56	3.17	-0.39	-11.0
Other Fruit	15.32	13.62	-1.70	-11.1
Potatoes	5.01	4.10	-0.91	-18.2
Other Vegetables	3.86	3.00	-0.86	-22.3
Fats & Oils	1.77	2.03	0.26	14.9
Sugar & Sweets	-	-	-	-
All Food Groups	65.80	62.23	-3.57	-5.4

Food Group	Non-Perishables			
	Cost		Difference	
	1990	1992		
	\$	\$	\$	%
Dairy	14.95	17.00	2.05	13.7
Eggs	-	-	-	-
Meat, Fish,Poultry	1.30	1.31	0.01	0.9
Meat Alternates	3.40	5.19	1.79	52.8
Cereal & Bakery	25.51	28.91	3.40	13.3
Citrus	2.93	3.33	0.40	13.7
Other Fruit	1.95	2.77	0.82	41.9
Potatoes	-	-	-	-
Other Vegetables	24.38	24.43	0.05	0.2
Fats & Oils	2.02	2.24	0.22	11.1
Sugar & Sweets	2.77	2.81	0.04	1.6
All Food Groups	86.47	95.51	9.04	10.5

Food Group	Northern Food Basket*			
	Cost		Difference	
	1990	1992		
	\$	\$	\$	%
Dairy	22.56	24.16	1.60	7.1
Eggs	4.84	5.10	0.26	5.3
Meat, Fish,Poultry	19.05	18.86	-0.19	-1.0
Meat Alternates	3.88	5.92	2.04	52.5
Cereal & Bakery	31.11	34.69	3.58	11.5
Citrus	6.49	6.50	0.01	0.1
Other Fruit	17.27	16.39	-0.88	-5.1
Potatoes	5.01	4.10	-0.91	-18.2
Other Vegetables	28.24	27.43	-0.81	-2.9
Fats & Oils	3.79	4.28	0.49	12.9
Sugar & Sweets	2.77	2.81	0.04	1.6
All Food Groups	152.27	157.74	5.47	3.6

* Adapted from Agriculture Canada's Thrifty Nutritious Food Basket. Meets nutrient requirements of a family of four: man and woman (25-49 years);

Table 17c. *Change in weekly cost of Food Groups, Fort Severn 1991-92*

Food Group	Perishables			
	Cost		Difference	
	1991	1992		
	\$	\$	\$	%
Dairy	11.47	13.36	1.90	16.6
Eggs	4.23	4.05	-0.18	-4.3
Meat, Fish,Poultry	26.98	28.80	1.83	6.8
Meat Alternates	1.17	1.42	0.25	20.9
Cereal & Bakery	6.98	7.39	0.40	5.8
Citrus	4.13	3.96	-0.17	-4.0
Other Fruit	28.16	22.73	-5.43	-19.3
Potatoes	18.18	19.72	1.54	8.5
Other Vegetables	5.60	5.78	0.17	3.1
Fats & Oils	2.18	2.19	0.02	0.8
Sugar & Sweets	-	-	-	-
All Food Groups	109.07	109.40	0.33	0.3

Food Group	Non-Perishables			
	Cost		Difference	
	1991	1992		
	\$	\$	\$	%
Dairy	20.12	21.75	1.63	8.1
Eggs	-	-	-	-
Meat, Fish,Poultry	1.55	1.39	-0.15	-9.8
Meat Alternates	5.84	6.26	0.42	7.3
Cereal & Bakery	35.04	36.30	1.26	3.6
Citrus	6.91	7.40	0.49	7.1
Other Fruit	4.00	4.04	0.05	1.1
Potatoes	-	-	-	-
Other Vegetables	59.84	47.39	-12.45	-20.8
Fats & Oils	3.10	3.29	0.20	6.4
Sugar & Sweets	5.87	5.31	-0.56	-9.6
All Food Groups	154.82	145.27	-9.55	-6.2

Food Group	Northern Food Basket*			
	Cost		Difference	
	1991	1992		
	\$	\$	\$	%
Dairy	31.59	35.12	3.53	11.2
Eggs				
Meat, Fish,Poultry	28.52	30.20	1.68	5.9
Meat Alternates	7.01	7.68	0.67	9.6
Cereal & Bakery	42.02	43.69	1.67	4.0
Citrus	11.04	11.36	0.32	2.9
Other Fruit	32.16	26.77	-5.38	-16.7
Potatoes	18.18	19.72	1.54	8.5
Other Vegetables	65.44	53.17	-12.28	-18.8
Fats & Oils	5.27	5.49	0.22	4.1
Sugar & Sweets	5.87	5.31	-0.56	-9.6
All Food Groups	263.89	254.67	-9.22	-3.5

* Adapted from Agriculture Canada's Thrifty Nutritious Food Basket. Meets nutrient requirements of a family of four: man and woman (25-49 years); boy (13-15 years) and girl (7-9 years).

Table 17d. *Change in weekly cost of Food Groups, Pond Inlet 1991-93*

Food Group	Perishables					
	Cost			Difference, 91-92		Difference, 92-93
	1991	1992	1993			
	\$	\$	\$	\$	%	\$ %
Dairy	17.32	14.47	12.94	-2.85	-16.5	-1.53 -10.6
Eggs	6.60	5.35	5.62	-1.25	-18.9	0.27 4.9
Meat, Fish, Poultry	31.58	32.52	27.77	0.94	3.0	-4.76 -14.6
Meat Alternates	1.34	1.28	1.33	-0.06	-4.7	0.05 3.9
Cereal & Bakery	9.34	8.08	7.56	-1.26	-13.5	-0.52 -6.4
Citrus	5.64	4.70	4.55	-0.94	-16.6	-0.15 -3.2
Other Fruit	34.41	24.16	24.39	-10.25	-29.8	0.23 0.9
Potatoes	29.97	23.51	21.30	-6.46	-21.5	-2.21 -9.4
Other Vegetables	8.32	5.81	5.86	-2.51	-30.2	0.05 0.9
Fats & Oils	2.22	2.27	2.27	0.05	2.5	0.00 -0.2
Sugar & Sweets	-	-	-	-	-	- -
All Food Groups	146.73	122.16	113.59	-24.57	-20.1	-8.57 -7.0

Food Group	Non-Perishables					
	Cost			Difference, 91-92		Difference, 92-93
	1991	1992	1993			
	\$	\$	\$	\$	%	\$ %
Dairy	18.91	15.54	21.57	-3.37	-17.8	6.03 38.8
Eggs	-	-	-	-	-	- -
Meat, Fish, Poultry	1.68	1.74	1.55	0.06	3.6	-0.19 -10.7
Meat Alternates	7.87	6.64	7.32	-1.23	-15.6	0.68 10.2
Cereal & Bakery	35.32	34.93	36.97	-0.39	-1.1	2.04 5.8
Citrus	4.91	6.06	6.29	1.15	23.5	0.22 3.7
Other Fruit	5.10	4.22	4.13	-0.87	-17.1	-0.09 -2.1
Potatoes	-	-	-	-	-	- -
Other Vegetables	48.87	49.67	52.35	0.79	1.6	2.68 5.4
Fats & Oils	3.09	3.26	3.55	0.18	5.7	0.29 8.9
Sugar & Sweets	5.85	5.91	5.69	0.06	1.1	-0.22 -3.7
All Food Groups	145.52	141.40	153.02	-4.12	-2.8	11.62 8.2

Food Group	Northern Food Basket*					
	Cost			Difference, 91-92		Difference, 92-93
	1991	1992	1993			
	\$	\$	\$	\$	%	\$ %
Dairy	36.23	30.01	34.51	-6.22	-17.2	4.50 15.0
Eggs	6.60	5.35	5.62	-1.25	-18.9	0.27 4.9
Meat, Fish, Poultry	33.26	34.26	29.32	1.00	3.0	-4.94 -14.4
Meat Alternates	9.21	7.92	8.65	-1.29	-14.0	0.73 9.2
Cereal & Bakery	44.66	43.01	44.53	-1.65	-3.7	1.52 3.5
Citrus	10.55	10.77	10.84	0.22	2.1	0.07 0.6
Other Fruit	39.51	28.38	28.52	-11.12	-28.2	0.14 0.5
Potatoes	29.97	23.51	21.30	-6.46	-21.5	-2.21 -9.4
Other Vegetables	57.19	55.48	58.21	-1.72	-3.0	2.73 4.9
Fats & Oils	5.30	5.53	5.82	0.23	4.3	0.29 5.2
Sugar & Sweets	5.85	5.91	5.69	0.06	1.1	-0.22 -3.7
All Food Groups	292.25	263.56	266.61	28.69	-9.8	3.05 1.2

* Adapted from Agriculture Canada's Thrifty Nutritious Food Basket. Meets nutrient requirements of a family of four: man and woman(25-49 years); boy (13-15 years) and girl (7-9 year)

Table 17e. *Change in weekly cost of Food Groups, Arctic Bay 1992-93*

Food Group	Perishables Cost		Difference	
	1992 \$	1993 \$		
Dairy	16.94	16.30	-0.64	-3.8
Eggs	4.18	3.85	-0.33	-7.9
Meat, Fish, Poultry	39.55	30.28	-9.27	-23.4
Meat Alternates	1.98	1.28	-0.70	-35.4
Cereal & Bakery	9.74	8.59	-1.15	-11.8
Citrus	5.91	4.46	-1.45	-24.6
Other Fruit	28.18	22.95	-5.23	-18.6
Potatoes	25.80	24.17	-1.62	-6.3
Other Vegetables	6.69	7.13	0.44	6.6
Fats & Oils	2.25	2.27	0.02	1.1
Sugar & Sweets	-	-	-	-
All Food Groups	143.31	123.21	-20.10	-14.0

Food Group	Non-Perishables		Difference	
	1992 \$	1993 \$		
Dairy	21.06	26.44	5.38	25.5
Eggs	-	-	-	-
Meat, Fish, Poultry	1.58	1.57	0.00	-0.3
Meat Alternates	7.63	8.25	0.62	8.1
Cereal & Bakery	33.84	39.32	5.48	16.2
Citrus	5.31	5.31	0.00	0.0
Other Fruit	3.95	4.13	0.18	4.6
Potatoes	-	-	-	-
Other Vegetables	51.18	53.66	2.47	4.8
Fats & Oils	3.26	3.42	0.16	4.9
Sugar & Sweets	5.78	6.51	0.73	12.7
All Food Groups	147.44	162.21	14.77	10.0

Food Group	Northern Food Basket*		Difference	
	1992 \$	1993 \$		
Dairy	38.00	42.74	4.74	12.5
Eggs	4.18	3.85	-0.33	-7.9
Meat, Fish, Poultry	41.12	31.85	-9.27	-22.5
Meat Alternates	9.61	9.53	-0.08	-0.9
Cereal & Bakery	43.58	47.91	4.33	9.9
Citrus	11.22	9.77	-1.45	-12.9
Other Fruit	32.14	27.09	-5.05	-15.7
Potatoes	25.80	24.17	-1.62	-6.3
Other Vegetables	57.88	60.79	2.91	5.0
Fats & Oils	5.51	5.70	0.18	3.3
Sugar & Sweets	5.78	6.51	0.73	12.7
All Food Groups	290.75	285.42	-5.33	-1.8

* Adapted from Agriculture Canada's Thrifty Nutritious Food Basket. Meets nutrient requirements of a family of four: man and woman (25-49 years); boy (13-15 years) and girl (7-9 years).

Table 17f. Change in weekly cost of Food Groups, Gjoa Haven, 1992-93

Food Group	Perishables Cost		Difference	
	1992 \$	1993 \$		
Dairy	14.72	13.48	-1.23	-8.4
Eggs	3.34	3.30	-0.04	-1.2
Meat, Fish, Poultry	22.08	28.30	6.23	28.2
Meat Alternates	1.10	1.01	-0.09	-8.3
Cereal & Bakery	8.45	8.51	0.06	0.7
Citrus	6.79	4.39	-2.41	-35.4
Other Fruit	28.88	26.68	-2.21	-7.6
Potatoes	26.71	23.84	-2.87	-10.7
Other Vegetables	8.99	7.90	-1.09	-12.1
Fats & Oils	2.66	2.37	-0.29	-11.0
Sugar & Sweets	-	-	-	-
All Food Groups	125.38	121.42	-3.96	-3.2

Food Group	Non-Perishables Cost		Difference	
	1992 \$	1993 \$		
Dairy	21.29	24.24	-0.04	13.8
Eggs	-	-	-	-
Meat, Fish, Poultry	1.52	1.48	-0.04	-2.4
Meat Alternates	8.36	7.48	-0.88	-10.5
Cereal & Bakery	35.93	35.08	-0.88	-2.4
Citrus	5.58	5.66	0.09	1.6
Other Fruit	3.08	4.28	1.20	39.0
Potatoes	-	-	-	-
Other Vegetables	53.29	53.51	0.22	0.4
Fats & Oils	3.21	3.19	-0.02	-0.8
Sugar & Sweets	6.19	5.44	-0.75	-12.1
All Food Groups	151.64	153.46	1.82	1.2

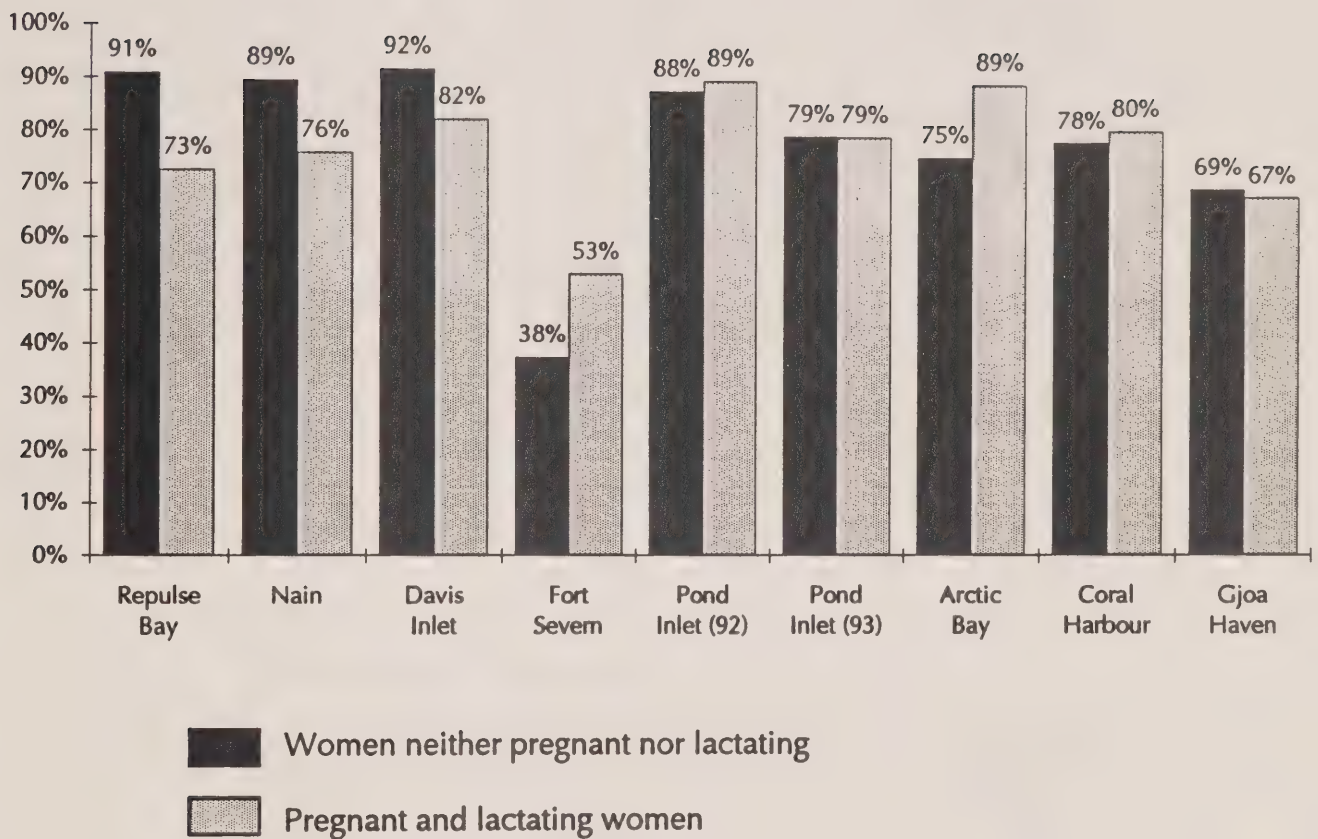
Food Group	Northern Food Basket*		Difference	
	1992 \$	1993 \$		
Dairy	36.00	37.82	1.71	4.8
Eggs	3.34	3.30	-0.04	-1.2
Meat, Fish, Poultry	23.60	29.79	6.19	26.2
Meat Alternates	9.46	8.49	-0.97	-10.2
Cereal & Bakery	44.38	43.58	-0.80	-1.8
Citrus	12.37	10.05	-2.32	-18.7
Other Fruit	31.97	30.96	-1.00	-3.1
Potatoes	26.71	23.84	-2.87	-10.7
Other Vegetables	62.28	61.41	-0.87	-1.4
Fats & Oils	5.87	5.56	-0.32	-5.4
Sugar & Sweets	6.19	5.44	-0.75	-12.1
All Food Groups	277.02	274.88	-2.14	-0.8

* Adapted from Agriculture Canada's Thrifty Nutritious Food Basket. Meets nutrient requirements of a family of four: man and woman (25-49 years); boy (13-15 years) and girl (7-9 years).

Appendix II

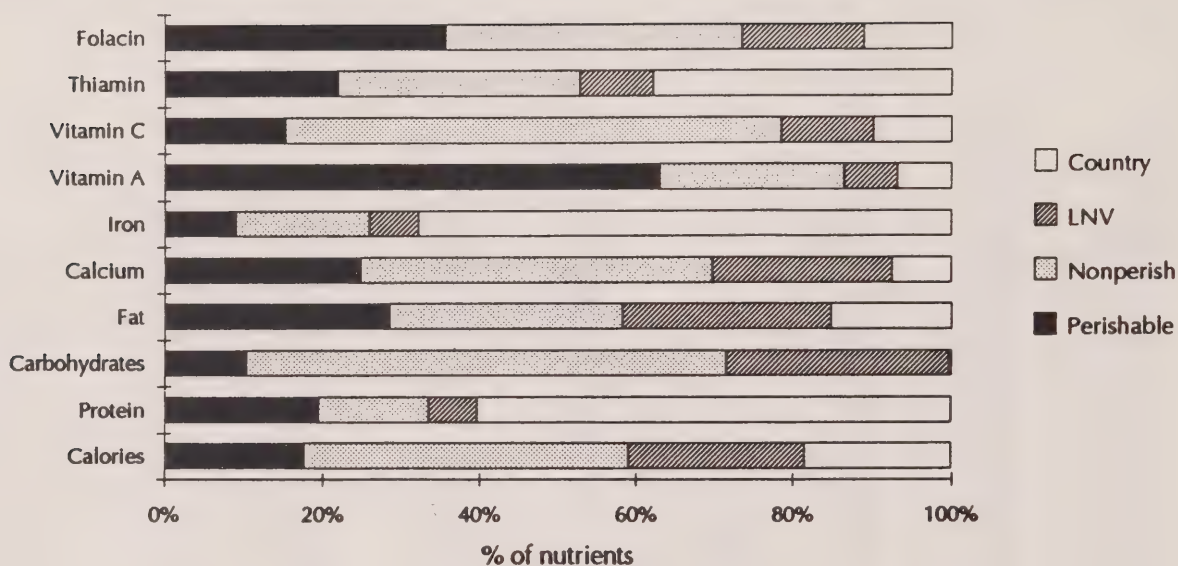
Figures

Figure 1. Smoking rates by community



**Figure 2. Percentage nutrients from country and store foods:
a) Repulse Bay, b) Nain**

Repulse Bay



Nain

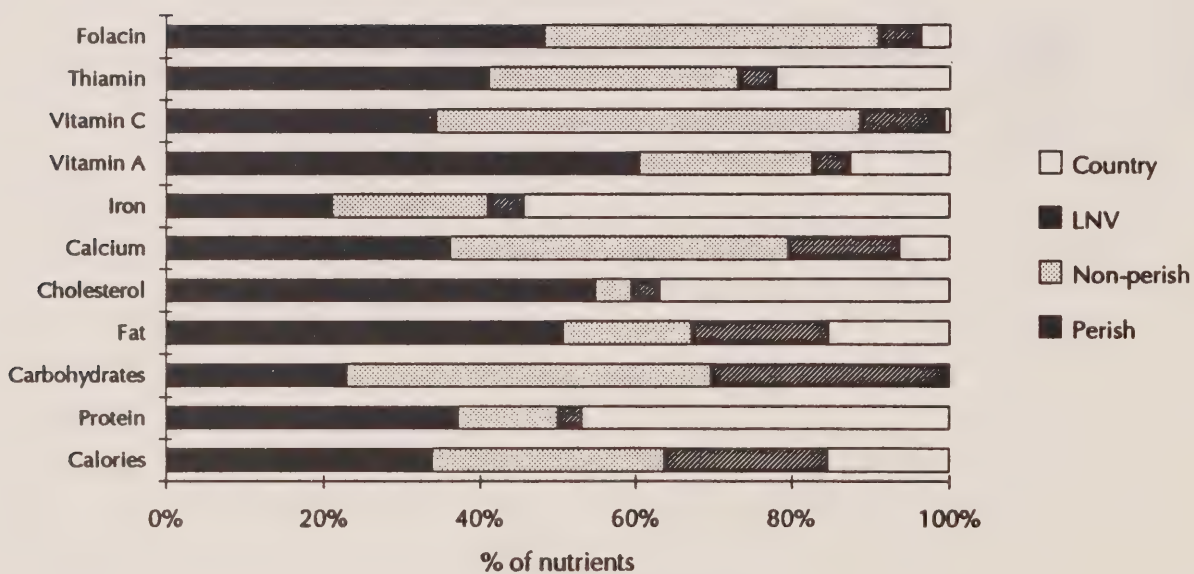
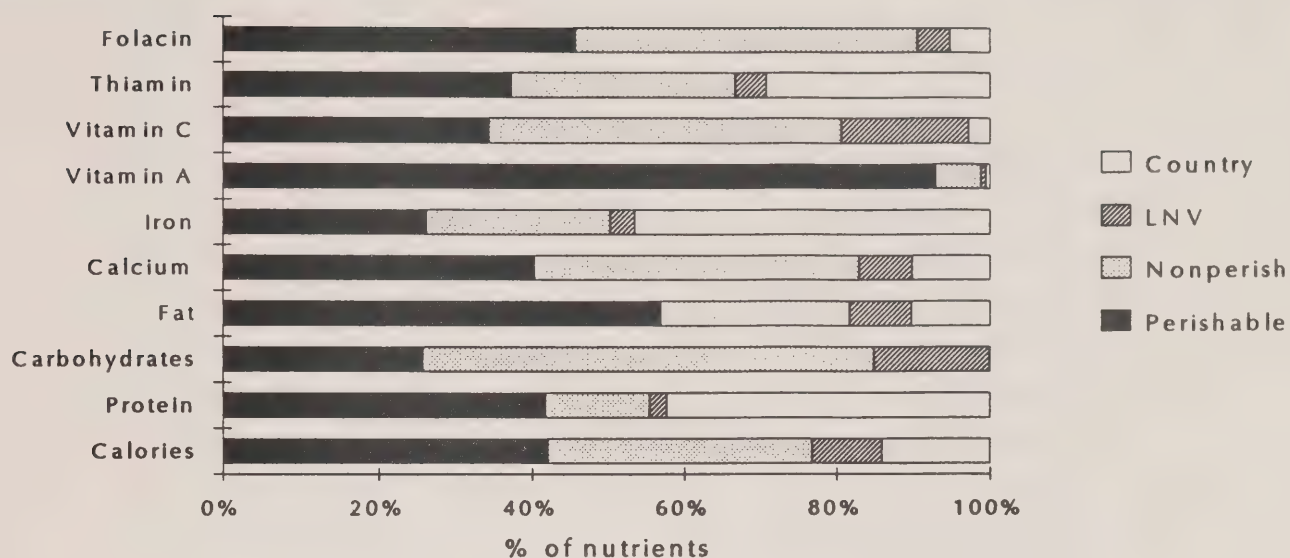


Figure 2 (cont'd). Percentage nutrients from country and store foods:
c) Davis Inlet, d) Fort Severn

Davis Inlet



Fort Severn

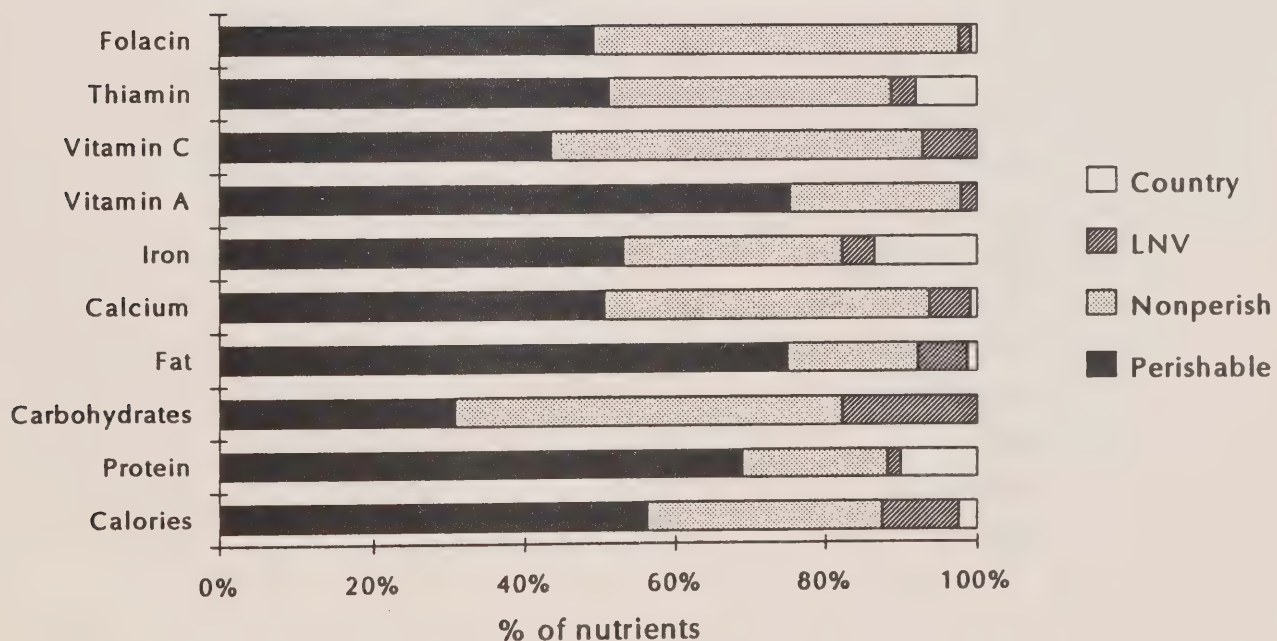
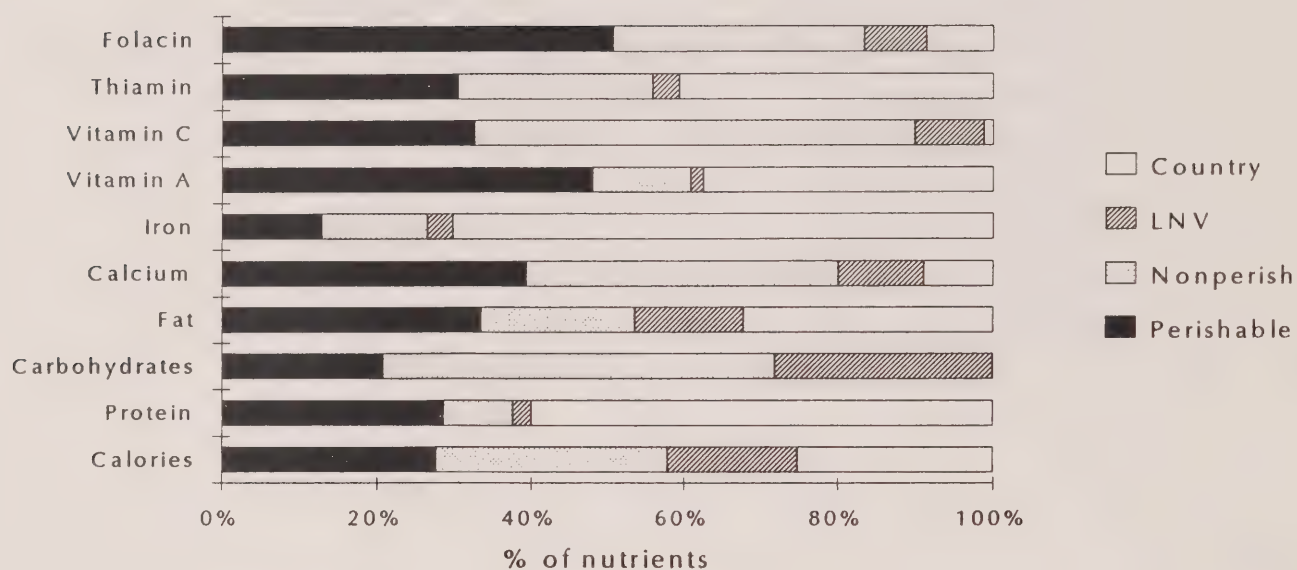


Figure 2 (cont'd). Percentage nutrients from country and store foods:
e) Pond Inlet 1992, f) Pond Inlet 1993

Pond 1992



Pond 1993

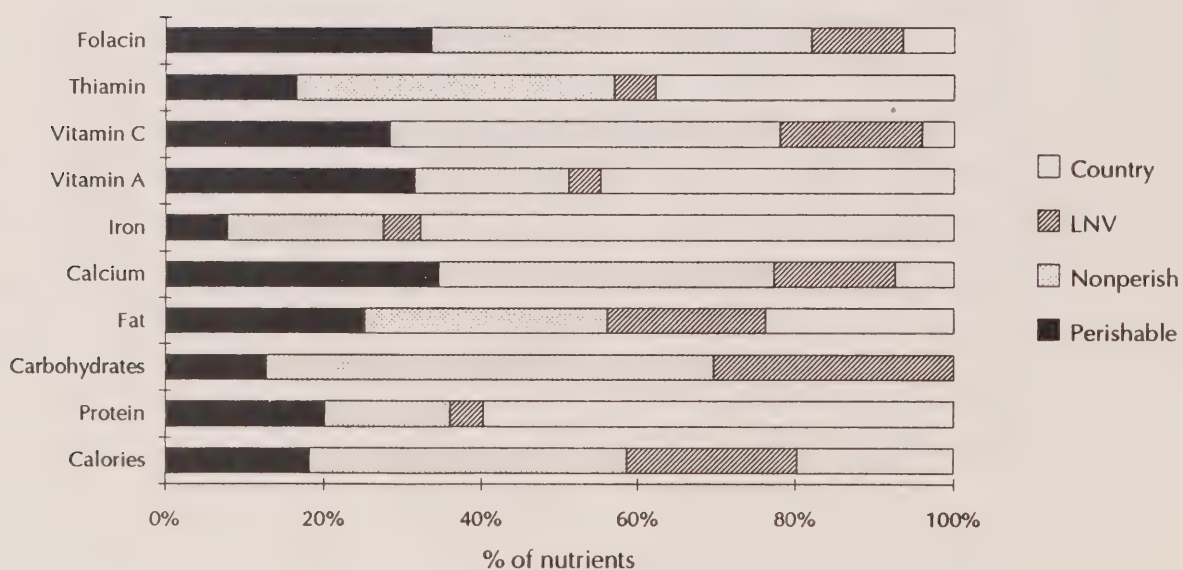
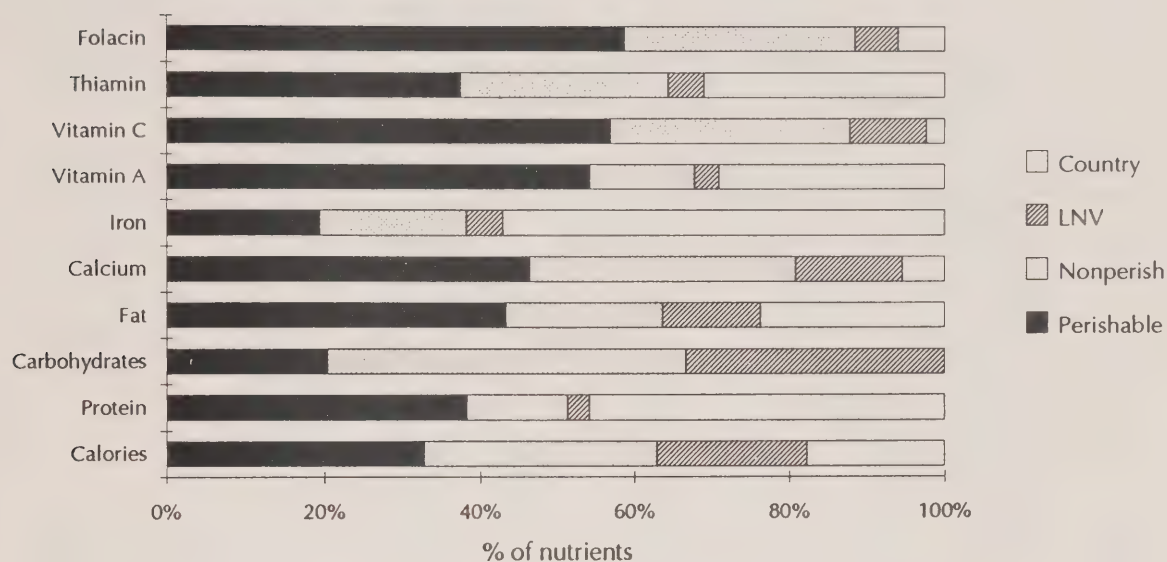


Figure 2 (cont'd). Percentage nutrients from country and store foods
g) Arctic Bay, h) Coral Harbour

Arctic Bay



Coral Harbour

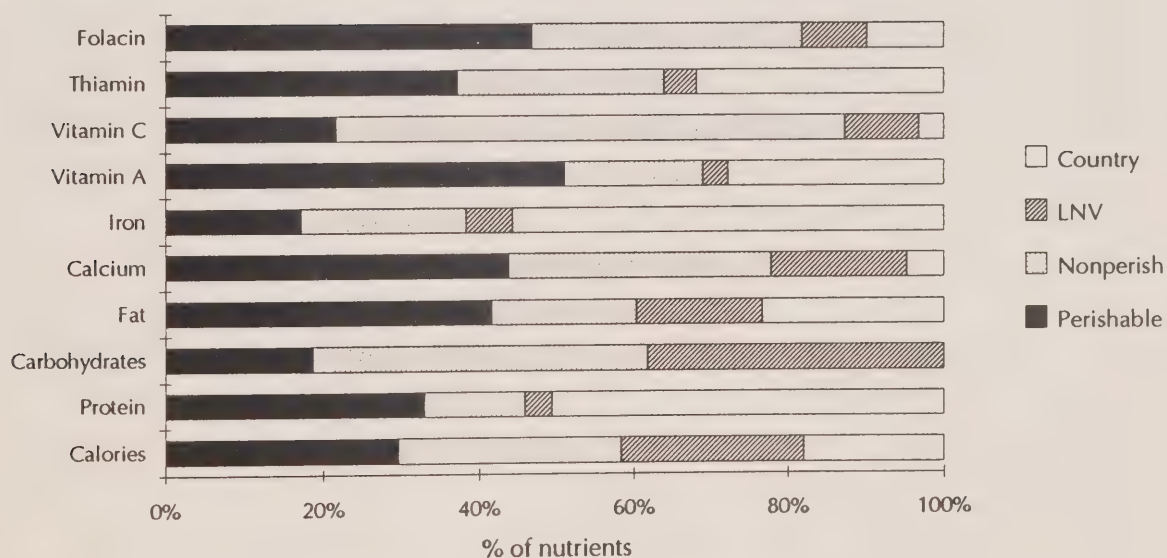


Figure 2 (cont'd). Percentage nutrients from country and store foods:
i) Gjoa Haven

Gjoa Haven

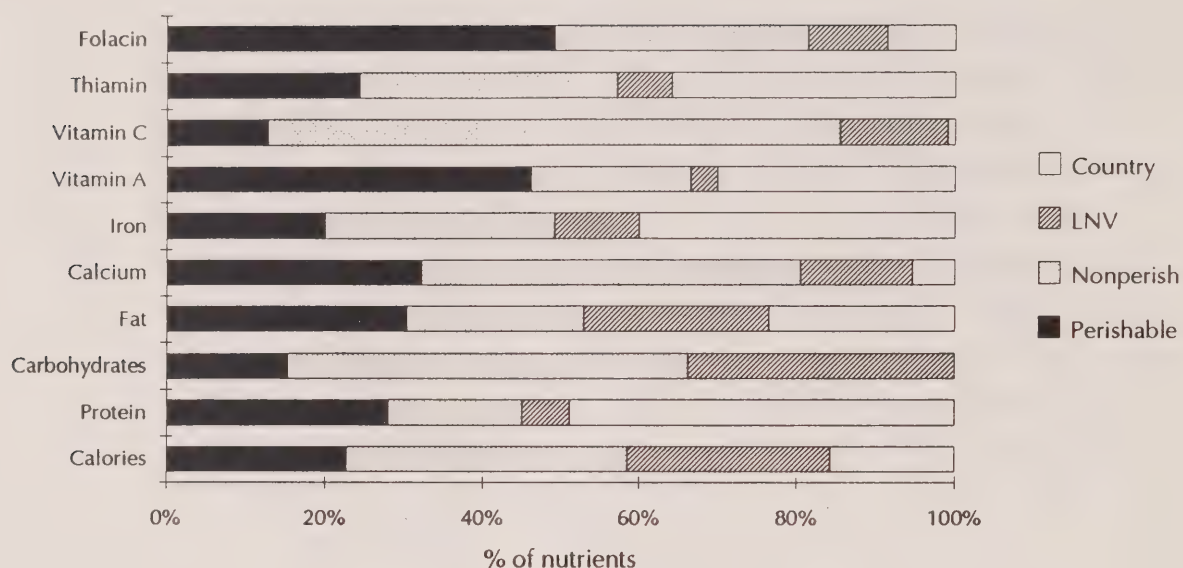
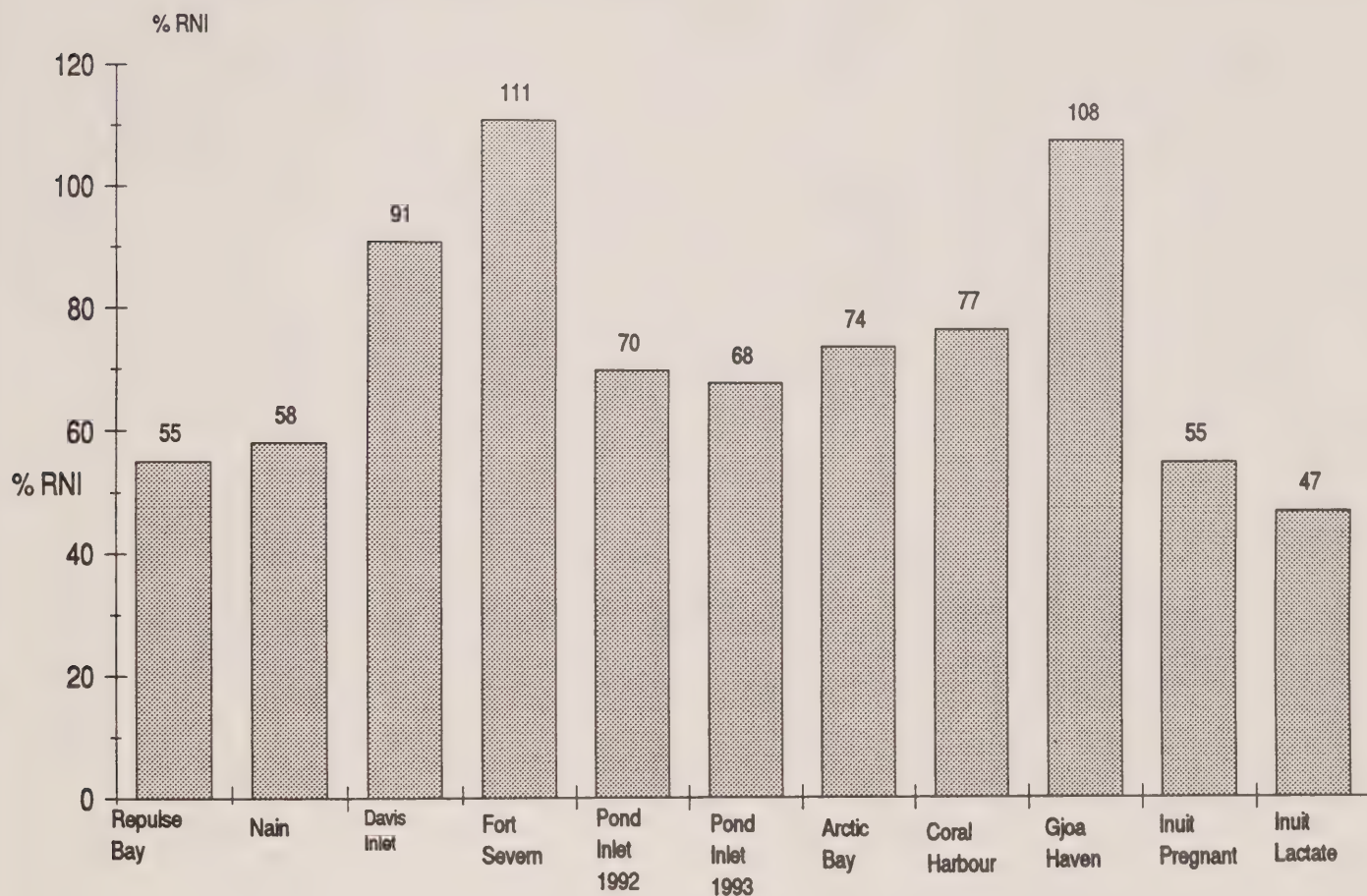
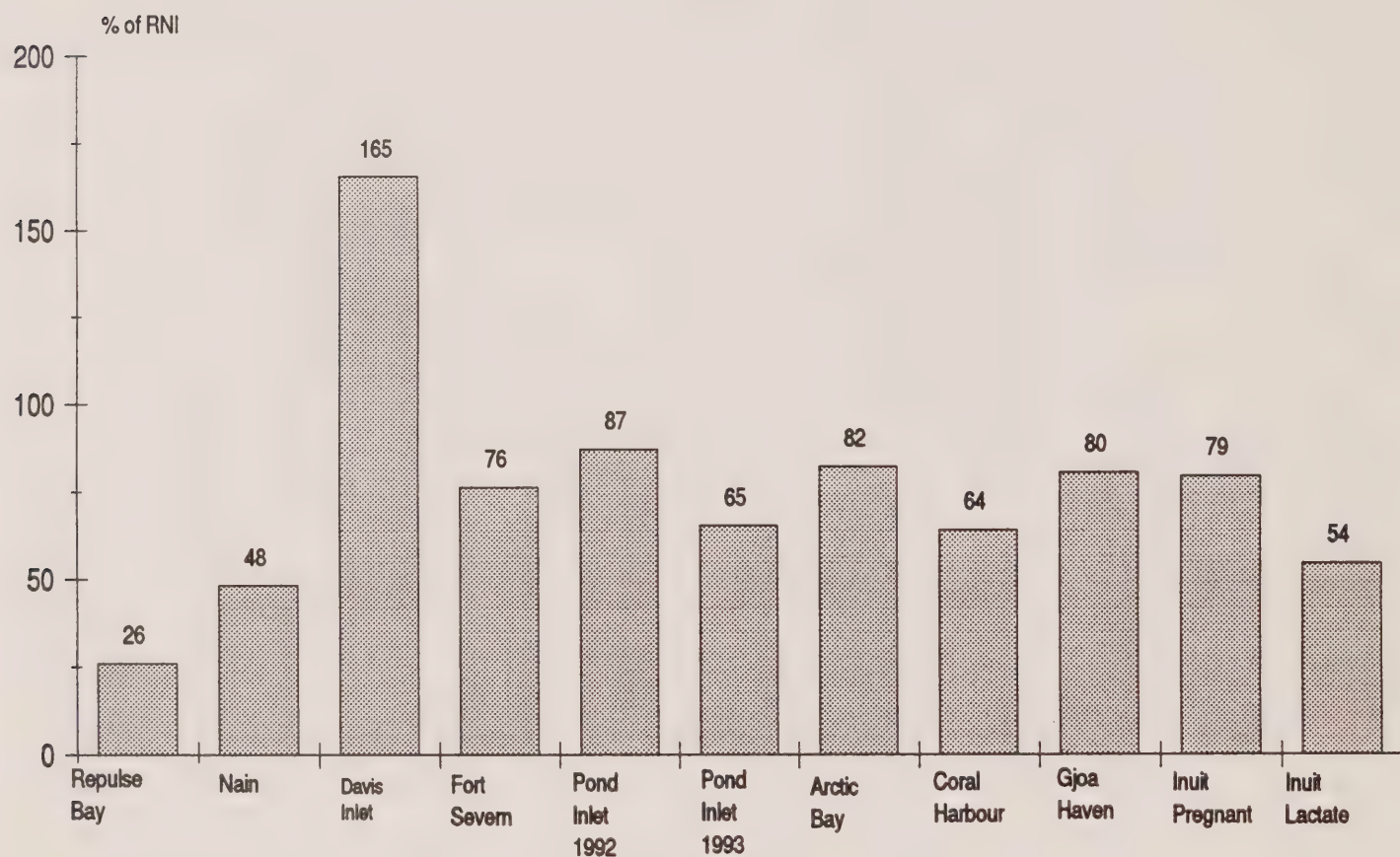


Figure 3a. Calcium intake as a percent of RNI, for all women by community and for pregnant and lactating Inuit women



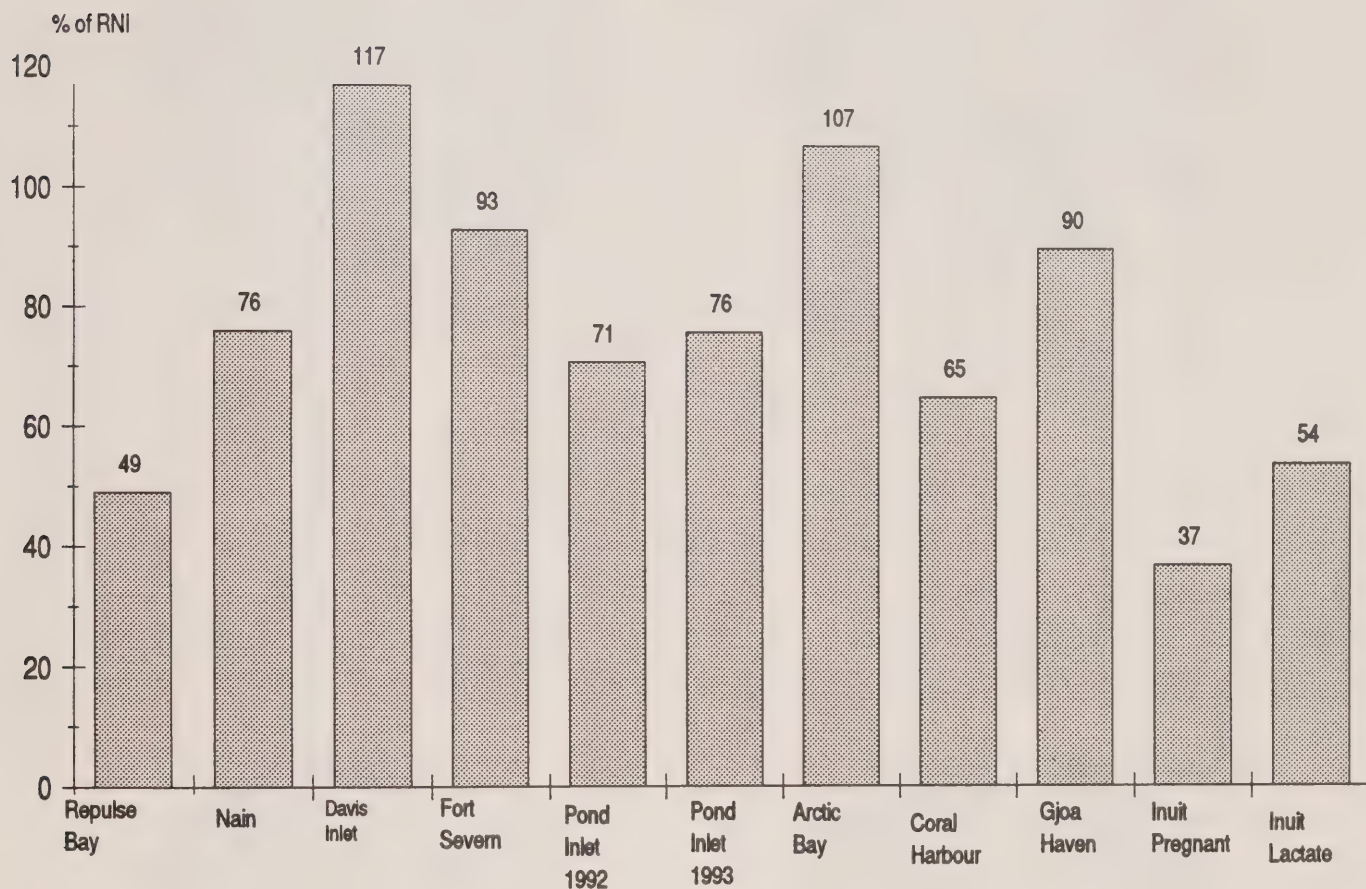
RNI for all women:700 mg; pregnant and lactating women:1200 mg

Figure 3b. Vitamin A intake as a percentage of RNI for all women by community and for pregnant and lactating women



RNI: for all women and pregnant women: 800 RE; for lactating women: 1200 RE

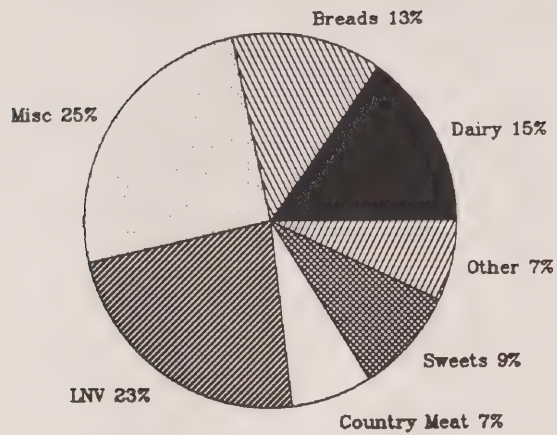
Figure 3c. Folic acid intake as a percentage of RNI, for all women by community and for pregnant and lactating Inuit women



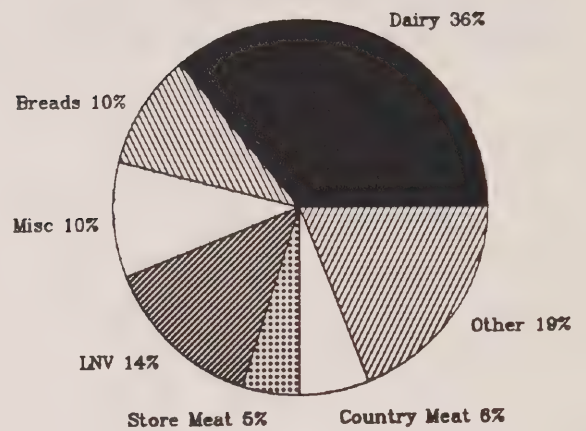
RNI: for all women 185 mcg; for pregnant women 385 mcg; for lactating women 285 mcg.

Figure 4. Sources of Calcium in the Diet

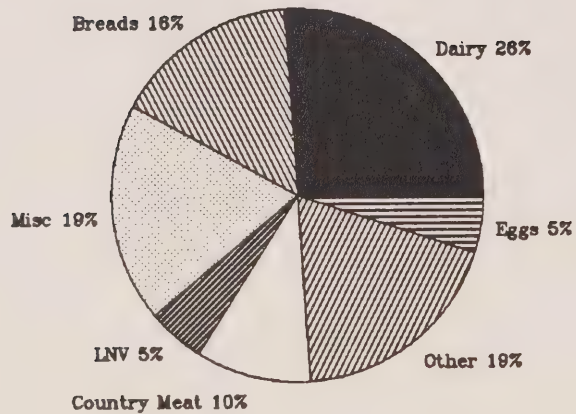
Repulse Bay



Nain



Davis Inlet



Fort Severn

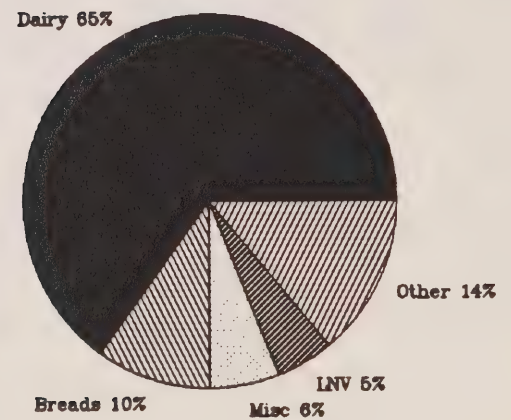
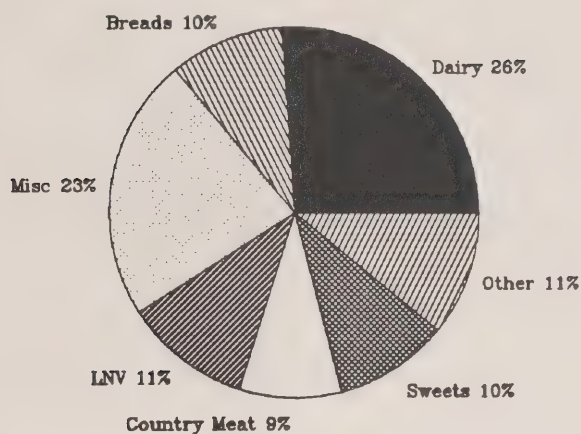
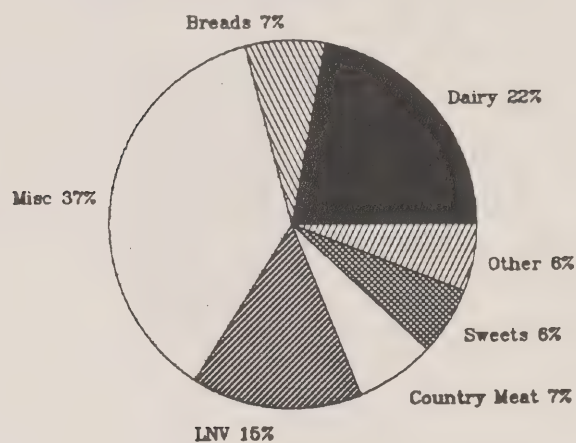


Figure 4 (cont'd). Sources of Calcium in the Diet

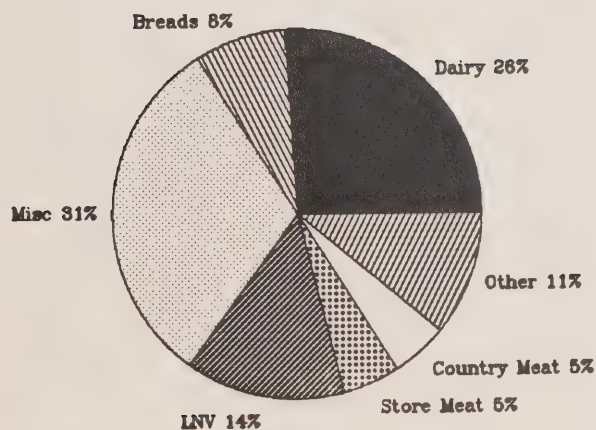
Pond Inlet 1992



Pond Inlet 1993



Arctic Bay



Coral Harbour

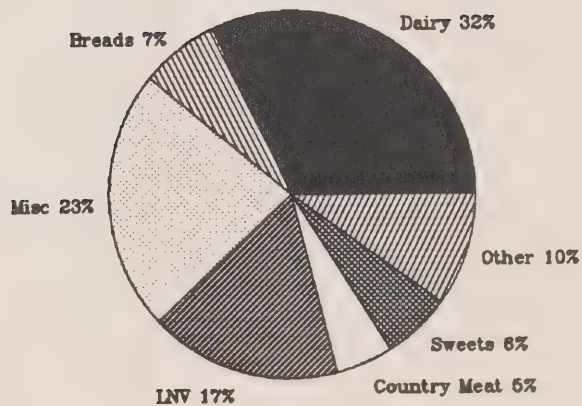


Figure 4 (cont'd). Sources of Calcium in the Diet

Gjoa Haven

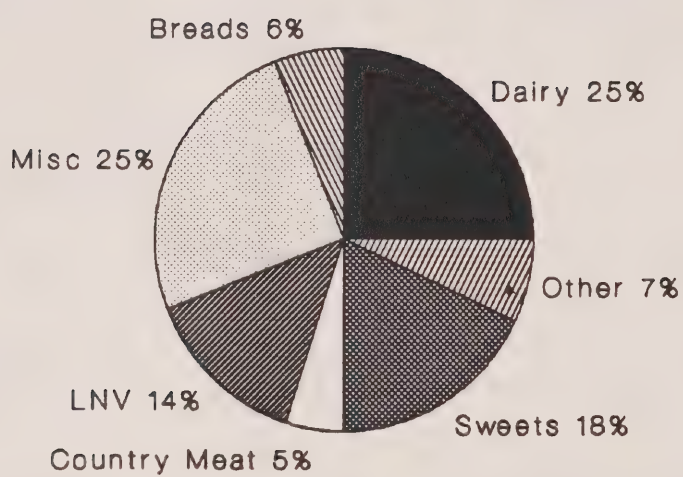
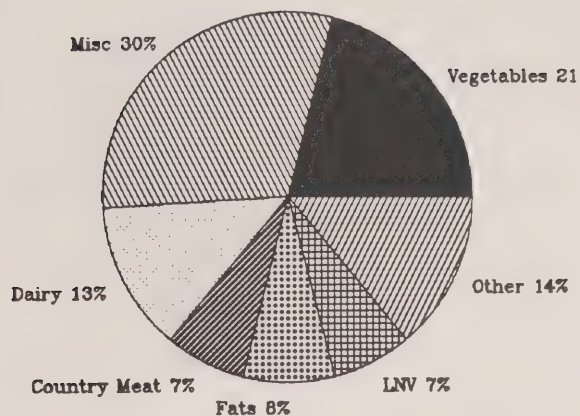
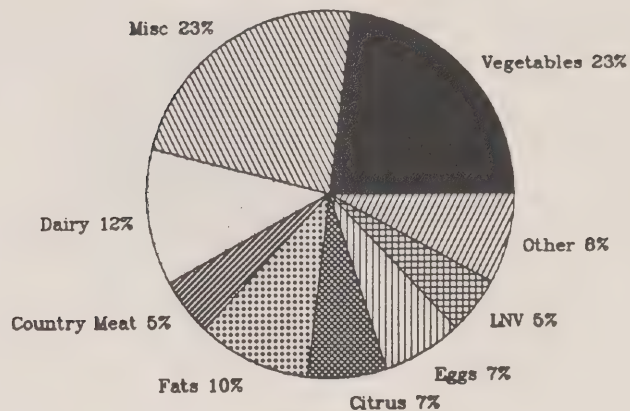


Figure 5. Sources of Vitamin A in the Diet

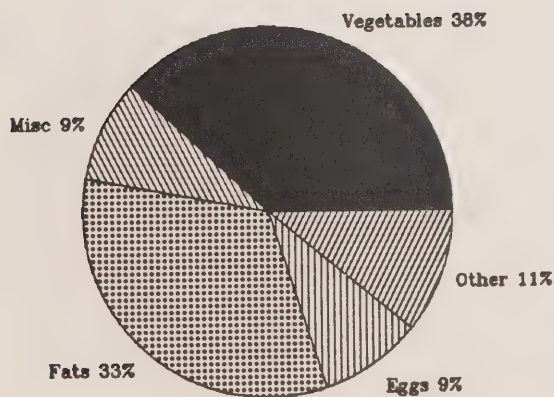
Repulse Bay



Nain



Davis Inlet



Fort Severn

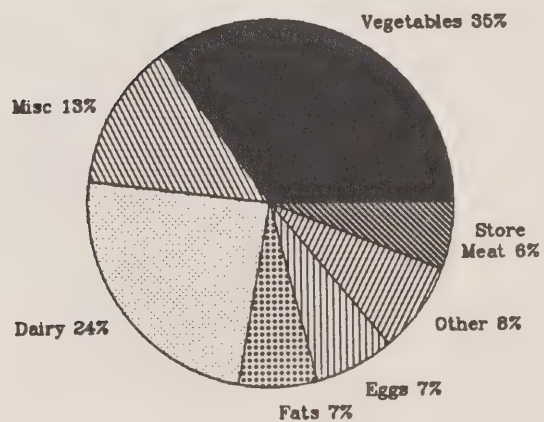
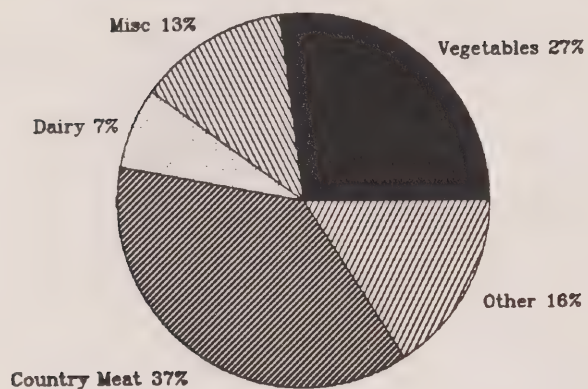
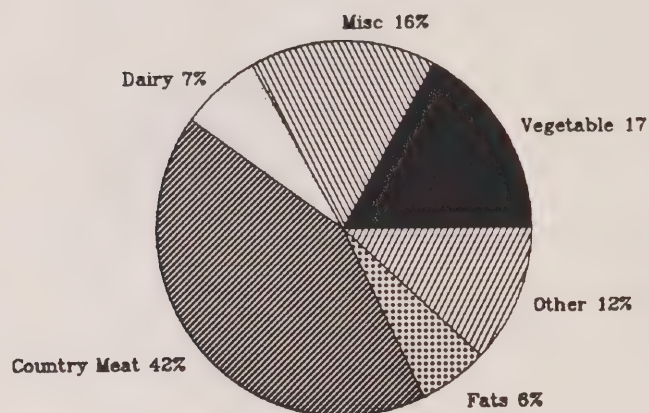


Figure 5 (cont'd). Sources of Vitamin A in the Diet

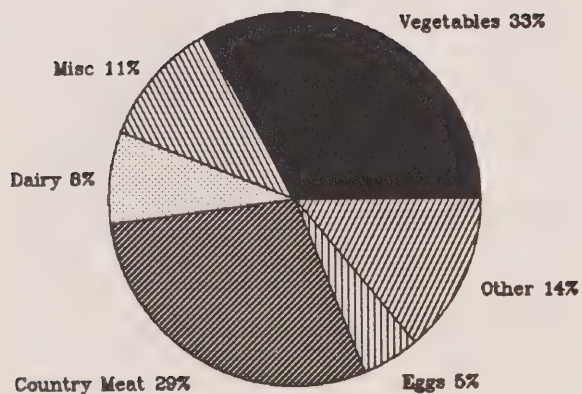
Pond Inlet 1992



Pond Inlet 1993



Arctic Bay



Coral Harbour

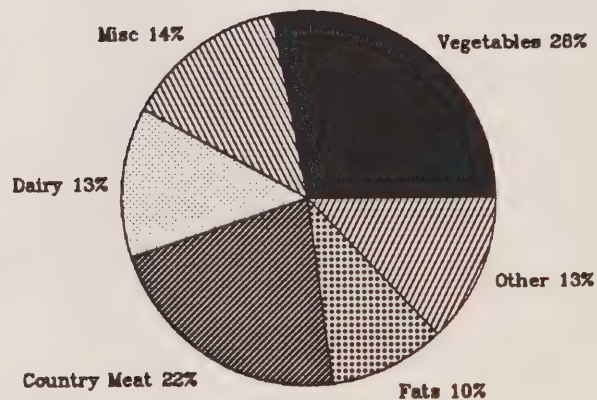


Figure 5 (cont'd). Sources of Vitamin A in the Diet

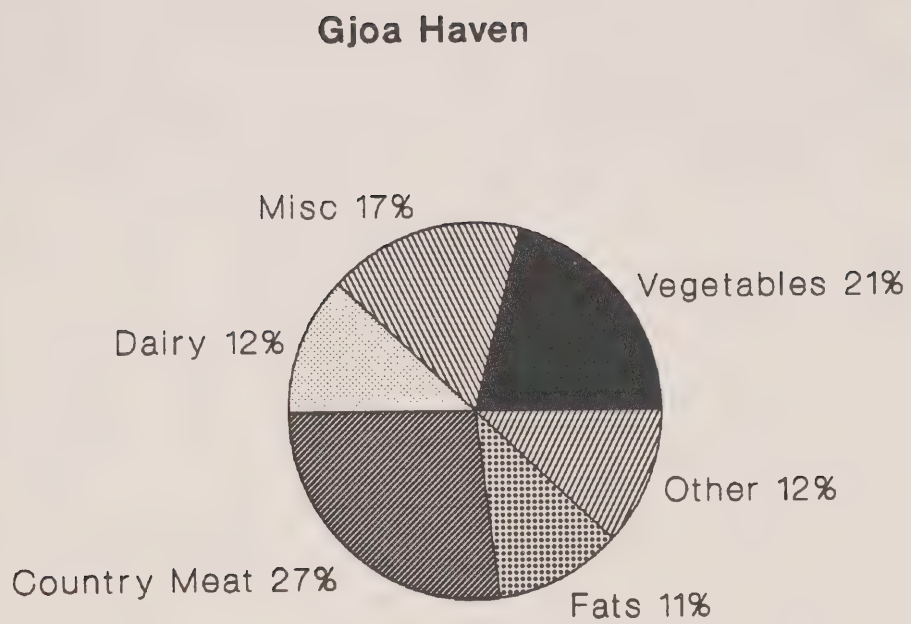
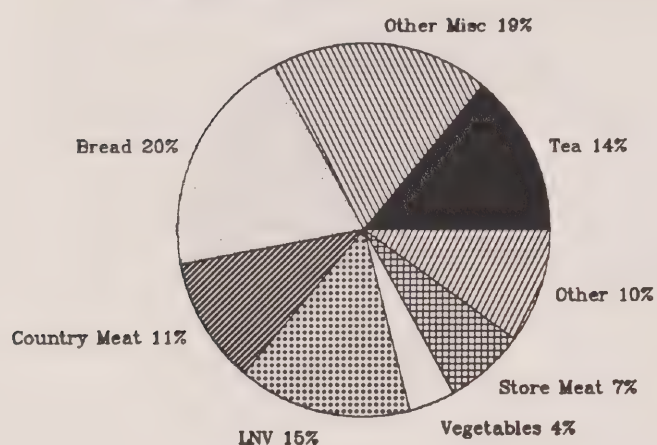
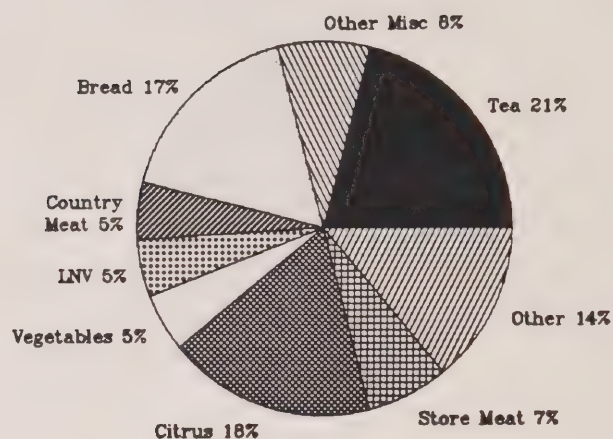


Figure 6. Sources of Folacin in the Diet

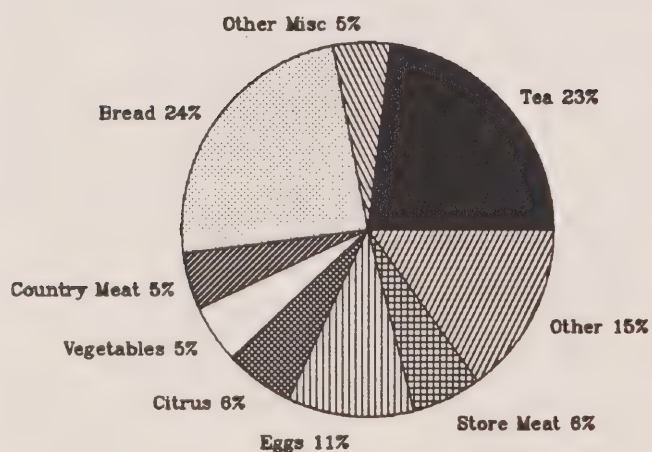
Repulse Bay



Nain



Davis Inlet



Fort Severn

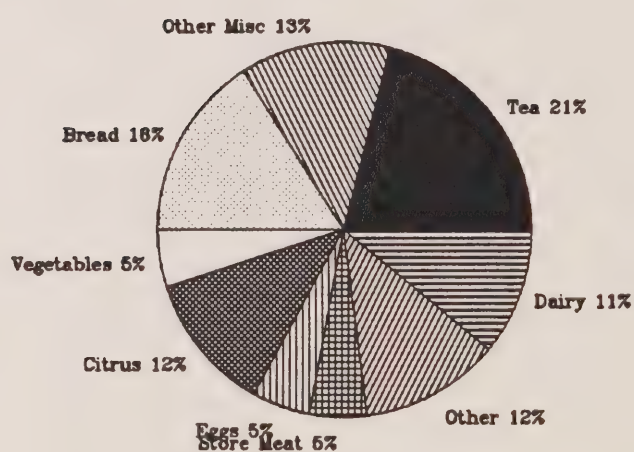
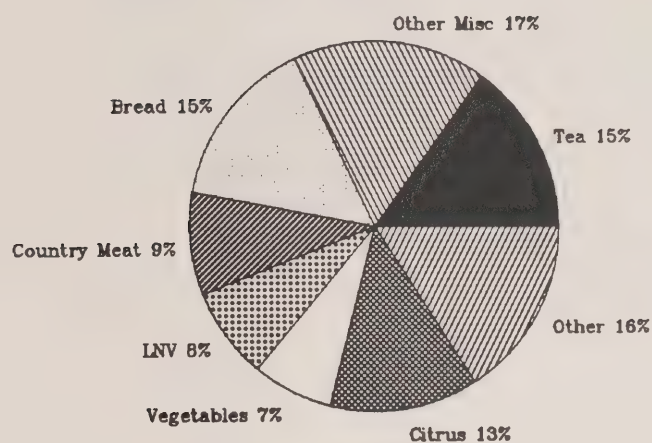
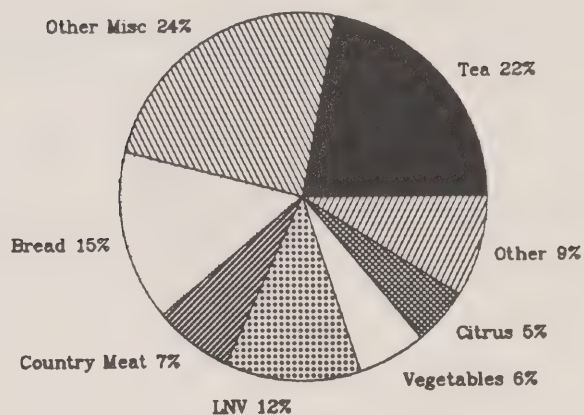


Figure 6 (cont'd). Sources of Folacin in the Diet

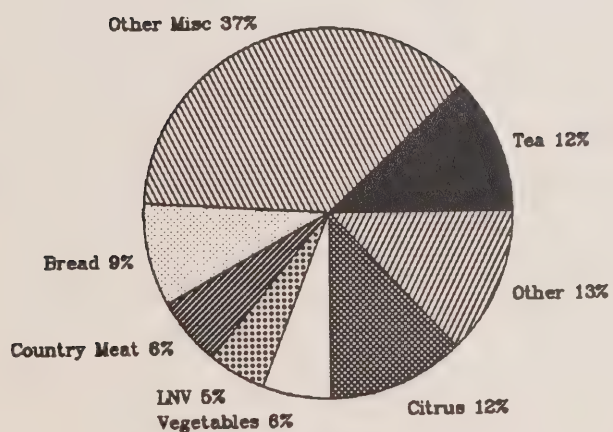
Pond Inlet 1992



Pond Inlet 1993



Arctic Bay



Coral Harbour

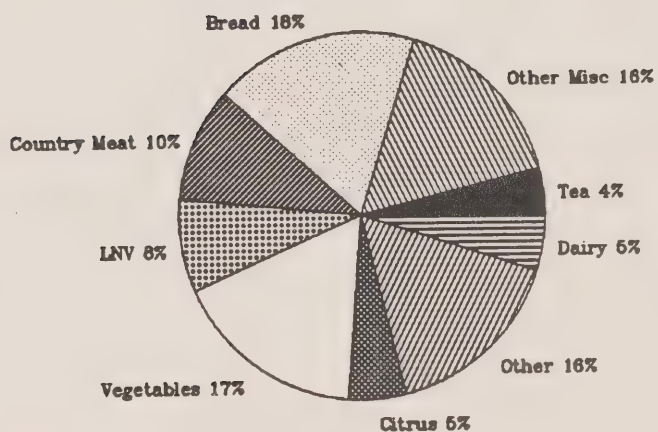


Figure 6 (cont'd). Sources of Folacin in the Diet

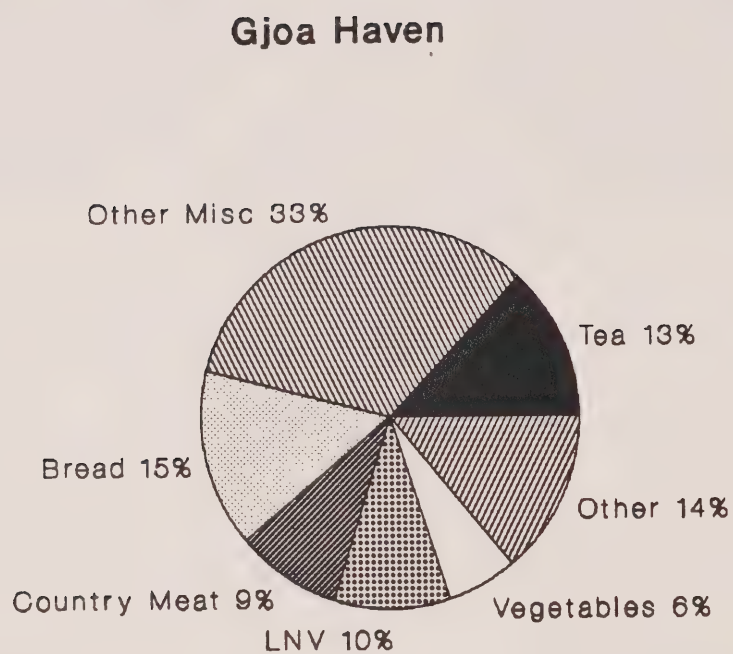
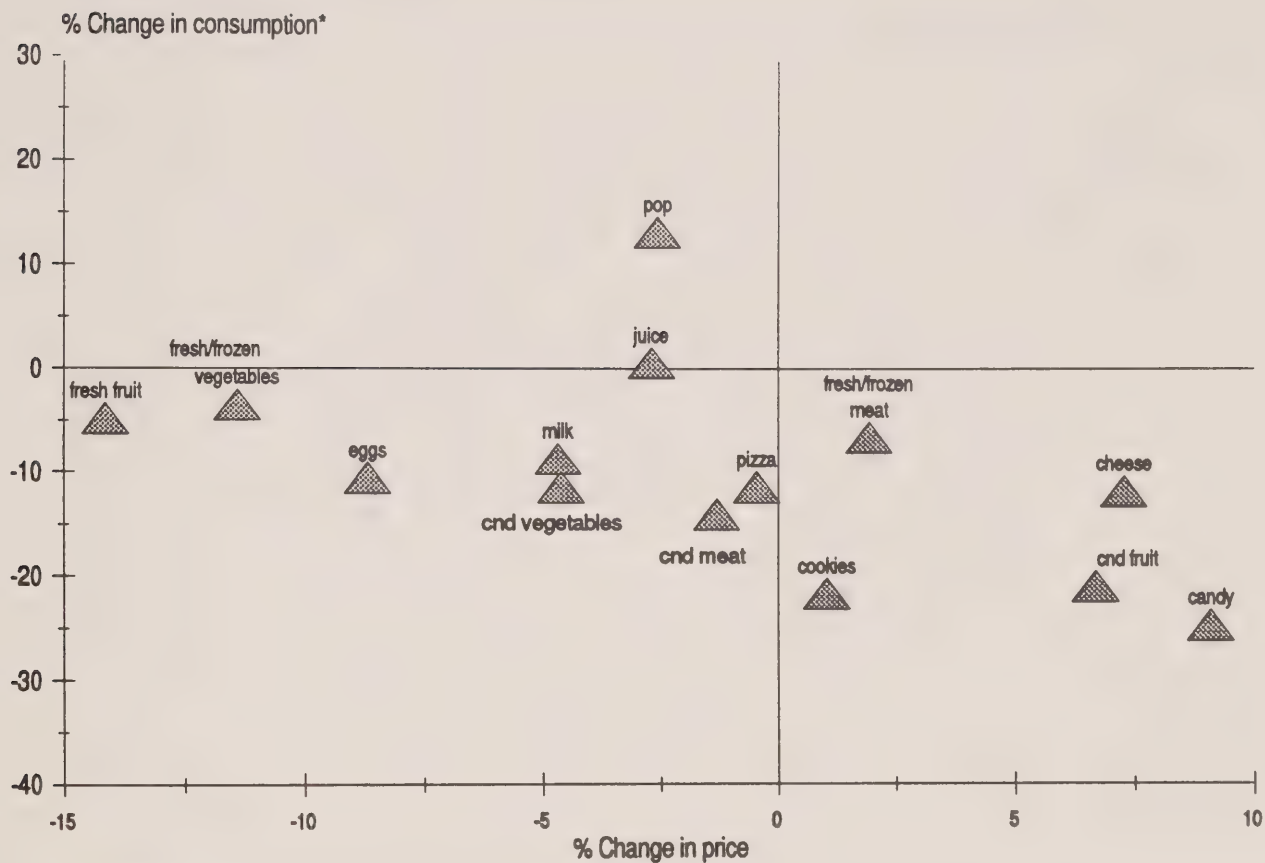
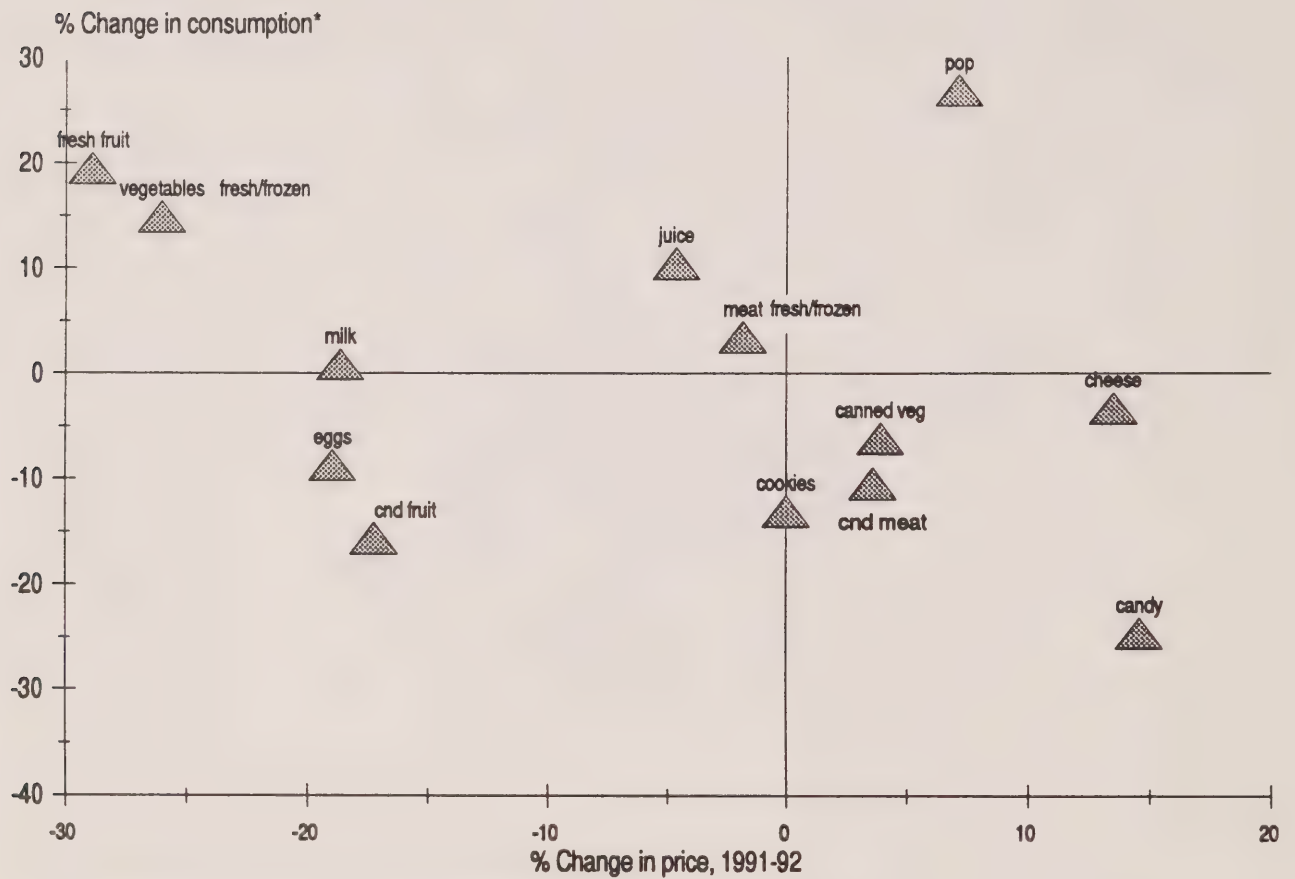


Figure 7a. Changes in food consumption vs. price change, all communities, 1991-92 and 1992-93



*Calculated as per cent reporting more minus per cent reporting less.

Figure 7b. Changes in food consumption vs. price change Pond Inlet, 1991-92



*Calculated as per cent reporting more minus per cent reporting less.

Appendix III

Base Food Groups in the CANDI System with Food Mail Nutrition Survey Food Groups

BASE FOOD GROUPS IN CANDI SYSTEM WITH FOOD MAIL NUTRITION SURVEY FOOD GROUPS

D. Brulé and J. N. Thompson
Nutrition Research Division

Explanation of Lists

When foods are recorded for a survey in the CANDI system, they may be examined as BASE FOODS, RECIPES, BASE FOOD GROUPS or RECIPE GROUPS. The following lists are those of BASE FOOD GROUPS that can be used to identify the sources of certain nutrients according to age/sex groups, income, education, place of eating, etc. The BASE FOOD GROUPS system has been adapted according to the British and American food group systems. The food groups in the left-hand column represent the twelve categories we used to represent all foods.

Food Mail Nutrition Survey Food Groups	BASE FOOD GROUPS IN CANDI SYSTEM
Breads & cereals	01 PASTA, RICE, CEREAL GRAINS & FLOURS 01A Pasta 01B Rice 01C Cereal grains & flours 02 WHITE BREADS 02A White breads 03 WHOLEMEAL BREADS 03A Whole wheat breads 03B Other whole grain breads 04 OTHER CEREAL PRODUCTS 04A Rolls, bagels, pita bread, croutons, dumplings, tortillas, etc.* 04B Crackers & crispbreads 04C Muffins & English muffins* 04D Pancakes & waffles* 04E Croissants, pie crusts* 04F Dry mixes (cakes, muffins, pancakes) 05 WHOLE GRAIN & HIGH FIBRE BREAKFAST CEREALS 05A Whole grain, oats and high fibre breakfast cereals 06 OTHER BREAKFAST CEREALS 06A Breakfast cereals 07 COOKIES & BISCUITS, COMMERCIAL 07A Cookies* 07B Biscuits* 08 CAKES, PIES, DANISHES & OTHER PASTRIES, COMMERCIAL 08A Pies (e.g. Pop-Tarts)* 08B Cakes (e.g. frozen cake)* 08C Danishes, doughnuts & other pastries*
Dairy	09 FROZEN DAIRY PRODUCTS 09A Ice creams 09B Ice milk 09C Frozen yogourts

- 10 MILKS
 - 10A Milk, whole
 - 10B Milk, 2%
 - 10C Milk, 1%
 - 10D Milk, skim
 - 10E Milk, evaporated, whole
 - 10F Milk, evaporated, 2%
 - 10G Milk, evaporated, skim
 - 10H Milk, condensed
 - 10I Other types of milk (soya, goat, buttermilk, etc.)
- 13 CREAMS
 - 13A Whipping
 - 13B Table
 - 13C Half & half
 - 13D Sour
- 14 CHEESES
 - 14A Cottage cheeses
 - 14B Cheeses, less than 10% M.F.
 - 14C Cheeses, 10% M.F. to 25% M.F.
 - 14D Cheeses, more than 25% M.F.
- 15 YOGOURTS
 - 15A Yogourts, less than 2% M.F.
 - 15B Yogourts, 2% or more M.F.
- Eggs 16 EGGS
 - 16A Eggs
 - 16B Frozen egg substitutes
- Fats 17 BUTTER
 - 17A Butter
- 18 MARGARINES, TUB
 - 18A Regular tub margarines
 - 18B Calorie-reduced tub margarines
- 20 MARGARINES, BLOCK
 - 20A Block margarines
- 21 OTHER FATS & SPREADS
 - 21A Vegetable oils
 - 21B Animal fats
 - 21C Shortening
- Meat, poultry, fish 22 BEEF
 - 22A Beef, lean only
 - 22B Beef, lean + fat
 - 22C Beef, ground
- 23 VEAL
 - 23A Veal, lean only
 - 23B Veal, lean + fat (incl. ground veal)
- 24 LAMB
 - 24A Lamb, lean only
 - 24B Lamb, lean + fat (incl. ground lamb)
- 25 PORK, FRESH AND HAM
 - 25A Pork, fresh, lean only

	25B Pork, fresh, lean + fat (including ground pork)
	25C Bacon
	25D Ham, cured, lean only
	25E Ham, cured, lean + fat
	27 POULTRY
	27A Chicken, meat only
	27B Chicken, meat + skin
	27C Turkey, meat only
	27D Turkey, meat + skin (incl. ground turkey)
	27E Other birds (duck, goose, partridge, ptarmigan, etc.)
	27F Birds, skin only
	28 LIVERS & LIVER PATES
	28A Livers
	28B Liver pates
	29 OFFALS (EXCL. LIVERS)
	29A Offals
	30 SAUSAGES (FRESH & CURED)
	30A Sausages and wieners
	31 GAME MEATS
	31A Game meats
Alternates	32 LUNCHEON MEATS (CANNED & COLD CUTS)
	32A Luncheon meats (bologna, salami, pepperoni, meat spreads)
	33 NUTS, SEEDS & PEANUT BUTTER
	33A Nuts
	33B Seeds
	33C Peanut butter and other nut spreads
Meat, poultry, fish	34 FISH
	34A Fish, less than 6% total fat
	34B Fish, 6% or more total fat
	35 SHELLFISH
	35A Shellfish
Vegetables	36 VEGETABLES (EXCL. POTATOES)
	36A Beans
	36B Broccoli
	36C Cabbage and kale
	36D Cauliflower
	36E Carrots
	36F Celery
	36G Corn
	36H Lettuces & leafy greens (spinach, etc.)
	36I Mushrooms
	36J Onion, green onions, leeks, garlic
	36K Peas and snow peas
	36L Peppers, red & green
	36M Squashes
Citrus	36N Tomatoes
	36O Tomato juice, vegetable juice
Vegetables	36P Other vegetables (cucumber, Brussels sprouts, beets, turnips, seaweed, etc.)

Alternates	37 LEGUMES
	37A Legumes (dried peas and beans, lentils, etc.)
	37B Foods made with vegetable proteins, coffee whitener*
Potatoes	38 POTATOES, FRIED
	38A Potato chips*
	38B Fried or roasted potatoes
	39 POTATOES (EXCL. FRIED)
	39A Potatoes
	40 FRUITS, RAW, COOKED, CANNED AND FROZEN
Citrus	40A Citrus fruits (oranges, grapefruits, lemons, etc.)
Fruit	40B Apples
	40C Bananas
	40D Cherries
	40E Grapes
	40F Melons (cantaloup, honeydew, watermelon)
	40G Peaches, nectarines
	40H Pears
	40I Pineapple
	40J Plums and prunes
	40K Strawberries
	40L Other fruits (blueberries, dates, kiwis, fruit salad, dried fruit)
Sweets	41 SUGARS & PRESERVES
	41A Sugars (white and brown)
	41B Jams, jellies and marmalades
	41C Other sugars (syrops, molasses, honey, etc.)
	41D Sugar substitutes (aspartame, dextrose)
	42 SAVOURY SNACKS
	42A Popcorn, plain + pretzels*
	42B Salty and high-fat snacks, including tortilla chips*
	43 CONFECTIONERY – SUGAR
	43A Candies, gums, etc.*
	43B Popsicles, sherbet*
	43C Jello, dessert toppings and pudding mixes, commercial*
	44 CONFECTIONERY – CHOCOLATE BARS*
	44A Chocolate bars
Citrus and Fruit	45 FRUIT JUICES
	45A Fruit juices
Sweets	46 NON-ALCOHOLIC BEVERAGES (SOFT AND FRUIT DRINKS, ETC.)
	46A Soft drinks, regular*
	46B Diet soft drinks*
	46C Fruit drinks*
	46D Other beverages (e.g., chocolate-flavoured beverage powder, instant breakfast)
Miscellaneous	47 SPIRITS & LIQUORS*
	47A Spirits (e.g. rye, gin, vodka)
	47B Liqueurs
	48 WINE*
	48A Wines

- 49 BEERS*
 - 49A Beers
 - 49B Ciders and coolers
- 50 MISCELLANEOUS
 - 50A Soups with vegetables
 - 50B Soups without vegetables
 - 50C Gravies
 - 50D Sauces (ketchup, soya, etc.)
 - 50E Salad dressings
 - 50F Seasonings (salt, pepper, vinegar, etc.)
 - 50G Meal replacements*
- 51 TEA, COFFEE & WATER
 - 51A Tea incl. iced tea*
 - 51B Coffee
 - 51C Water*
- 52 BABYFOOD PRODUCTS
 - 52A Babyfood products
 - 52B Infant formula
- 53 OTHER INGREDIENTS FOR RECIPES
 - 53A Spices
 - 53B Others (baking powder, yeast, etc.)
- 99 UNCLASSIFIED RECIPES IN CNF
 - 99A Mexican Recipes

* Some or all of the foods in this category were considered "Foods of Little Nutritional Value" (LNV). For more details, see Table 2 in Volume 1 of this report.

